Transformational change in the NHS:

Using action research to improve the way change leadership skills are developed

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Contents

Figures

Tables

Appendices

Abbreviations

ACT	Advancing Change and Transformation
AR	Action Research
CEO	Chief Executive Officer
CMO	Context, Mechanism and Outcome
NHS	National Health Service
NIHR	National Institute for Health Research
OD	Organisational Development
QSIR	Quality, Service Improvement and Redesign
STP	Sustainability and Transformation Partnership
TCSL	Transformational Change through System Leadership
UEC	Urgent and Emergency Care

Glossary of terms used in this research

ACT Academy	A department (formally known as the Advancing Change and Transformation team) within NHS Improvement providing professional development to those involved in changing NHS services.
CMO configuration	A realist term describing patterns of related contexts, mechanisms and outcomes.
Cohort	The teams and participants involved in a specific TCSL programme.
Faculty	Members of the ACT Academy responsible for the design and delivery of TCSL programmes.
Knowledge domain	A category of knowledge and related pedagogical practice relevant to transformational change (e.g. the knowledge domain of 'Creating a vision').
Module	A self-contained delivery element of a TCSL programme design (usually related to one knowledge domain).
NHS Improvement	A national NHS body with statutory responsibility for overseeing NHS trusts.
Nine factors framework	A set of nine key areas for action in transformational change developed by the ACT Academy as an overview of transformational practices.
Participant	Someone participating in a TCSL programme.
Research and evaluation team	A sub-team within the ACT Academy responsible for supporting programme evaluation and research activities.
TCSL programme	The Transformational Change through System Leadership programme delivered by the ACT Academy. This provides professional development and change support to people leading major changes to NHS services.

TCSL programme design	A curriculum for a specific TCSL programme (describing its modules, other content and delivery methods).
Team (TCSL programme specific)	A group (usually of 6-10 participants) attending a TCSL programme to work on a shared change project.
Transformational change	The movement of a system to a new and radically different stable state through mutually reinforcing changes in structures, processes and behaviours. Used synonymously with 'large scale change'.
Trust	An NHS organisation, usually delivering healthcare services to a geographically defined population (e.g. acute trusts, ambulance trusts etc.)

Acknowledgements

With grateful thanks to Dr Mary Hartog and Professor Ifan Shepherd for guiding and supporting my travels through the world of action research.

Thanks also to all the members of the ACT Academy and others who contributed to this research. This thesis would not have been possible without your willingness to share your time and wisdom and I hope it does justice to both.

Dedication

This thesis is dedicated to my partner Julie who kept me company on the journey.

Thanks for your patience and encouragement and for reminding me of the light at the end of the tunnel.

Abstract

This practice-based project explores the change leadership capabilities required in the English National Health Service (NHS) to undertake large scale change across complex environments. Due to a plurality of perspectives in the academic literature and limited empirical evidence about the mechanisms of major change, uncertainty exists about the nature of these capabilities and how NHS leaders can be supported to develop and apply them.

The context for this research is the work of a team who design and deliver professional development programmes for those seeking to undertake transformations across NHS services. Through insider action research, cycles were used to build the knowledge and collective intent required by the team to guide their on-going programme design activities between May 2016 and May 2018. During this period the research supported the team's delivery of seven development programmes, reaching over 400 individuals engaged in transformational change.

The research assisted the team in the creation, adaptation and testing of programme content and designs. Mixed methods were used to help the team engage in reflective discussions, undertake collaborative design activities and review participant programme evaluations. In parallel, inductive enquiries aided the team's understanding of transformational change by exploring the experiences of change experts and previous programme participants.

The research resulted in the refinement of a framework categorising major change leadership activities, underpinned by a new action-oriented model of transformation. Key aspects of change praxis were described through a definition of transformational change and a guide to the principles of effective change practice. Programme designs also came to explicitly emphasise the interdependency of content areas and encourage change leaders to establish their own theories of practice within which they could adopt mutually reinforcing actions.

Within the team, the collective understanding of members' tacit perspectives on transformation and associated pedagogical practices was enhanced. This created new insight into the factors contributing to complexity and greater awareness of some of the paradoxes shaping programme design decisions. Views on change leadership also evolved. The importance of trust building and cultural change as enablers of transformation were highlighted. Similarly, the value of creating increased connections between people in the

system undergoing change whilst supporting their alignment around a common purpose was also recognised. Further, leadership was suggested to include the navigation of the tensions and uncertainties encountered in transformation, appreciating the cognitive and affective demands of change at scale on both those involved in the change and those leading the change process.

What was this enquiry about?

1 Background

1.1 Introducing the research

Since its inception approximately 70 years ago the NHS has continually changed to meet the needs of a growing population and maintain the quality of its services. However, in recent years it has come under severe financial pressures and has struggled to meet challenging performance targets (King's Fund 2018).

While the approach of using incremental service improvement within single organisations has achieved many successes, this is now thought to be inadequate to deliver the scale, pace and sustainability of change required. Increasingly more ambitious change across multiple health and social care organisations is seen as the answer (NHS England, 2017).

This quest to transform the NHS is taking place in a context where more needs to be done to build the capabilities of those leading change (Berwick 2013; NHS Improvement, 2016). Yet doing this is far from straightforward. The unique characteristics of change at scale are hard to define (Levy, 1986) and may rely on conceptually challenging theories such as those of complexity science (Stacey and Knowles, 2016). A wide range of views also exist on the concepts, skills and tools that may be required in a transformation (Atkinson, Loftus and Jarvis, 2015; Powell, Rushmer and Davies, 2009), complicated by the diversity of the literature on change management (Iles and Sutherland, 2001; Pfeffer, 1993). Empirical evidence on transformation is also limited as studies of change in healthcare have been dominated by those based on small-scale initiatives (Best, Greenhalgh, Lewis, Saul, Carroll and Bitz, 2012).

This research was set in the professional development landscape of the NHS. It centred on the work of the ACT Academy (formerly known as the Advancing Change and Transformation

team). This team is part of NHS Improvement, the national body overseeing all NHS trusts. The ACT Academy's role is to develop the skills of those involved in changing NHS services. For change at scale this is delivered through its Transformational Change through Systems Leadership (TCSL) programmes. These provide workshops that support participants to learn new concepts, tools and techniques relevant to transformation which are usually applied to live projects both in the workshops and outside. TCSL programmes are designed and delivered by the ACT Academy teaching faculty of which I am a member.

This action-oriented enquiry adopted a mixed methods action research (AR) approach within a pragmatist and realist position. It was undertaken to improve the professional development provided through the TCSL programmes to those leading transformational changes in the NHS. It did this by building the knowledge, shared understanding and collective intent required by faculty members to revise our TCSL programmes, using participant feedback and faculty reflective practices to assess changes to programme content and designs. This took place as an iterative process spanning from May 2016 to May 2018. During this period the research helped to guide the evolution of seven TCSL programmes supporting over 400 individuals to improve their change practice.

Programme development occurred over five major AR cycles that were supported by other enquiries that sought to provide greater insight into transformational change. Figure 1 shows how this research can be represented as a combination of deductive and inductive processes (based on Toman, 2014).

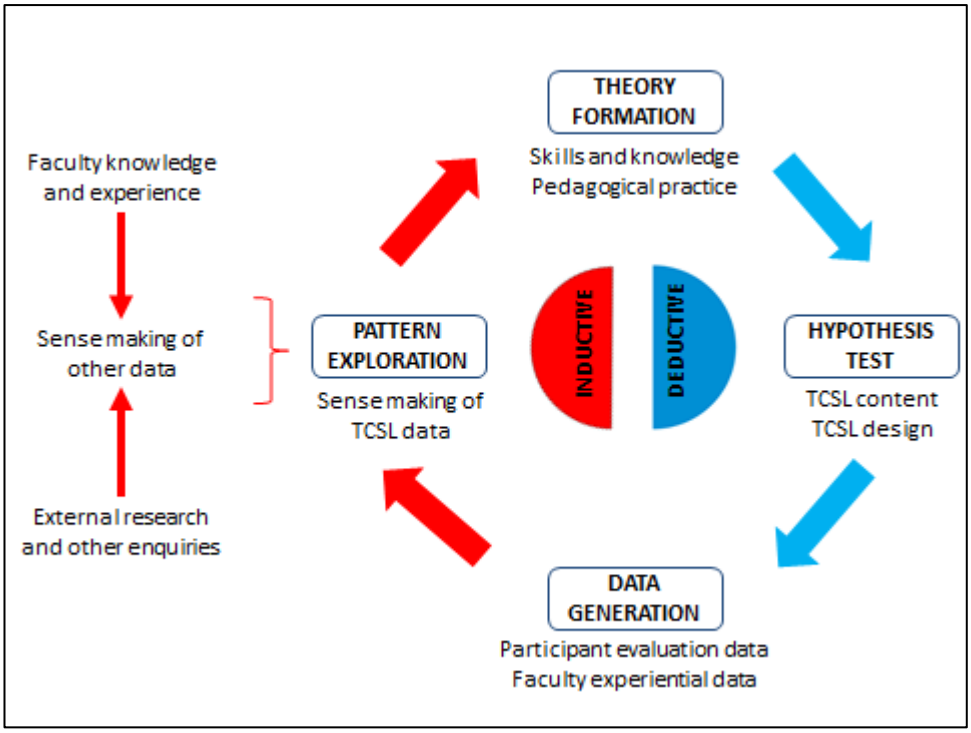


Figure 1: The deductive and inductive processes in this research

Towards the right of Figure 1 (shown in blue), faculty were supported to articulate their views on the skills, knowledge and pedagogical practices relevant to building capabilities in transformational change. These theories became embodied as hypotheses in the form of the content and design of TCSL programmes. Data relating to these hypotheses was then generated as programmes were delivered to participants. Their experience of the programmes and their application of the content to their projects during workshops meant that the participants' critical feedback, as experienced change leaders, served to test the programme hypotheses. This deductive process then also became the source of data for a further inductive process (shown in red) that supported revised faculty theories about the skills, knowledge and pedagogical practice relevant to the TCSL programmes. As shown to the left of Figure 1 this inductive process also incorporated further data derived from deeper exploration of faculty knowledge, external research or other enquiry processes. Each of these offered knowledge that could be used to influence the content and design of future TCSL programmes.

The cyclical process shown in Figure 1 represents a movement between data and the faculty's conceptualisation of transformational change and programme design. This is similar to the process of theory creation described by Pidgeon and Henwood (2004). In later chapters this inductive and deductive cycle is re-expressed as the action oriented cyclical AR method.

1.2 Why this research?

This research originated from my professional and personal interest in transformational change.

My professional interest was to support myself and colleagues to improve our practice in relation to the TCSL programmes. In particular I wanted the ACT Academy teaching faculty to explore and develop our collective knowledge of transformational change and to reflect this in our programmes. I also wanted us to learn about the participants' experiences of these programmes so that our support could be improved. Through these activities the ultimate goal was for us to become better at helping those leading major change in the NHS and through them contribute to an improved NHS for both staff and patients.

At a personal level I was intrigued by how the practice of transformation appears as an eclectic set of ideas that suggest a new change paradigm different from the mechanical metaphor. The latter has long been dominant in the change literature (Stacey and Mowles, 2016) and is based upon viewing organisations or systems as machines. Change is therefore typically seen as a linear process of diagnosis and action based upon the predictability of cause and effect (Morgan, 1997). Yet it is suggested that this metaphor fails as we move to larger systems, particularly those that involve people (Zimmerman, Lindburg and Plsek, 1998). With scale comes increasing complexity and cause and effect cease to have a consistent relationship. Systems can no longer to be understood through the behaviours of their individual parts (like a machine) and have to be seen in the context of the whole (Snowden and Boone, 2007; Sweeney and Griffiths, 2002). The 'tame' problems characteristic of incremental change, that could be logically and objectively managed, become at scale 'wicked problems' with no obvious answers. Solutions evolve through processes more akin to the improvisational, pragmatic act of bricolage than the deductive steps of planned change (Grint, 2008). But a new paradigm to describe these change processes has yet to fully appear (Pfeffer, 1993). Transformation, when viewed as 'second order change', is described in complimentary yet different ways across the academic literature (Levy, 1986) and hope for a new paradigm from complexity science is limited by the evolving nature of this field (Patton 2011) and doubts about whether its concepts can be transferred to organisational settings (Burnes, 2005).

Through my enquiries in this research I therefore wanted to contribute to the development of this emerging narrative about transformation in ways that would ultimately help to shape TCSL programmes. This would also support my journey as a professional, researcher and scholar of change.

1.3 Report structure

This research was undertaken as 'insider research' or more specifically 'insider action research' (Coghlan and Brannick, 2014). Throughout it, I was both a researcher and a faculty member engaged in action. This report is focused upon my role as a researcher and describes a series of research interventions that brought AR cycles into my professional practice and the work of the ACT Academy.

The main AR cycles are illustrated in Figure 2 which also references their location in later chapters.

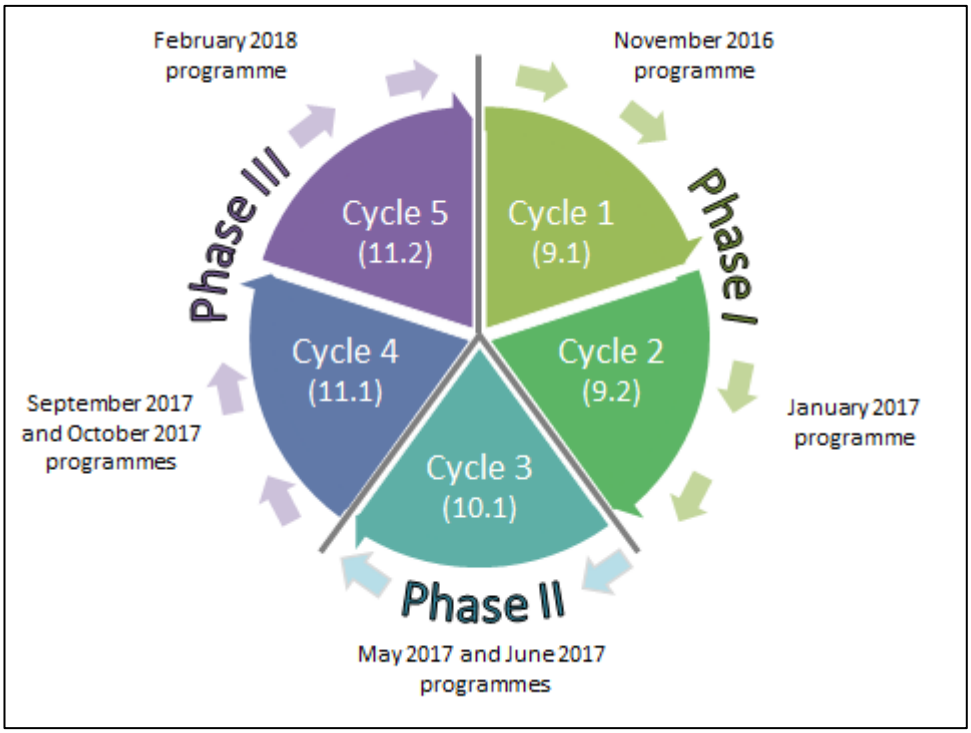


Figure 2: The main action research cycles aligned to three phases of programme delivery

Each main AR cycle relates to one or more TCSL programmes as shown in the figure. The five cycles are divided into three distinct phases. These are based on the style of TCSL programmes being delivered by the ACT Academy in those periods (described in detail in Chapter 7).

This report tells the story of the research across the following chapters.

Chapter 2 provides the context for this research. It introduces the ACT Academy and its wider NHS environment. The background to the TCSL programmes is described together with some of the terminology used in this report. It also explores attempts to create a new paradigm for change, illustrating how this presents a challenge for those supporting others to lead change. It ends by exploring the 'me' in this research, beginning the reflexive process of bracketing some of the biases and beliefs relevant to the research process.

Chapter 3 describes the research objectives and discusses the relationship between the different types of knowledge and action the research has sought to create. It expands the research objectives to identify some questions underlying the research and shows how these relate to different audiences.

Chapter 4 critically analyses some of the literature used to guide this research. Beginning with a discussion of what is meant by transformational change, it describes the diversity of perspectives seen in the literature and what this means for the ACT Academy. It then moves on to examine the field of AR, developing the cyclical model of action and enquiry used in this research. This cycle is also examined through the lens of complexity, to consider how AR can have relevance in complex change environments.

Chapter 5 begins to describe how this research programme was designed and delivered. It starts by introducing the guiding research paradigm based on pragmatism and realism to then offer the conceptual frameworks that influenced the overall research design. It then portrays the research design as a series of connected activity threads.

Chapter 6 moves from the research design into the detail of the mixed methods used. These are described alongside their accompanying analytical approaches. The chapter concludes by discussing ethics and insider action research, providing an overview of the challenges each presents and the details of actions taken in this research to address them.

Chapter 7 provides a brief overarching summary of the research activities, describing how different AR cycles and research elements fit together. This narrative is used to position how the next four chapters describe the detail of the research.

Chapter 8 starts to describe this detail by introducing three major inductive enquiry processes. These sought to understand different perspectives on transformational change and are described first due to their longitudinal influence on this research. Since they each

generated data that stimulated programme design activities and learning about transformational change, the chapter explores their findings in depth.

Chapter 9 begins to introduce the main AR cycles of this research starting with the two cycles undertaken in Phase I. These provide an account of the enquiry that supported the planning, design, delivery and evaluation of two TCSL programmes involving a total of 21 teams (124 participants).

Chapter 10 continues the AR journey by introducing the next cycle undertaken in Phase II of the research period. This focused on the creation and delivery of a new style of short TCSL programme christened 'Insights' that was provided to two groups (120 people).

Chapter 11 concludes the description of the main AR cycles with two undertaken in Phase III. These relate to three TCSL programmes used to support 30 teams (178 participants).

Chapter 12 compliments the three preceding chapters by extracting specific parts of the main cycles for discussion as examples of smaller, embedded AR cycles. These are explored in detail as each represented a personal attempt to expand the boundaries of knowledge about transformational change in ways that could enhance TCSL programmes.

Chapter 13 moves on to describe the achievements and learning from this research, returning to the research objectives. It considers the research in relation to what it has achieved for the ACT Academy, its wider relevance for those with an interest in transformational change and its impact on me as a professional, researcher and theorist. The limitations of the research are also discussed and the chapter closes with some final reflections on the research.

2 Context

2.1 The research setting

The ACT Academy exists to support those leading change in the NHS. Its programmes are created to provide professional development whilst supporting participants to apply their learning to live change projects.

TCSL programmes are designed and delivered collectively by a small teaching faculty. All faculty members have extensive NHS experience and are knowledgeable about the change literature. Most do not come from teaching backgrounds and instead draw upon organisational development or consultancy type practices to inform their work. During the two years of the research, three faculty members (myself included) were involved in all of the TCSL programmes throughout. A further three faculty members were involved for partial time periods meaning that typically there were 4-5 faculty members working on TCSL at any given point in time. Throughout most of this research I had the lead role for overseeing the development of the TCSL programmes. The faculty also included the overall director of the ACT Academy.

TCSL programmes are designed to incorporate a breadth of academic literature, often interpreted and adapted into tools or techniques that can be applied in systems undergoing change. Programmes are frequently updated to include new concepts and to reflect the formative feedback received from participants. Most programmes are predominantly workshop based. Team based programmes typically involve up to six workshop days delivered in two-day blocks over a period of 3-6 months. Such programmes would usually have 40-120 participants in teams of 4-10 people with each team bringing a unique live change project to the programme. Workshops combine faculty led teaching with application of the content to the projects. Further work on projects is expected to occur outside of the workshop setting but this is not directly supported by the faculty. Additional details about TCSL programmes can be found at NHS Improvement (2017).

When teams apply to join a TCSL programme they provide details of their proposed team membership and project, both of which are then assessed by faculty for their suitability for the programme. Participants are expected to be at director level or equivalent and be representative of the organisations most closely involved in the project. During the latter two phases of this research, participants often attended as formal representatives of system-wide governance groups referred to as Sustainability and Transformation Partnerships

(STPs). These groups are a recent addition to the NHS architecture and are part of an NHS policy of encouraging more integrated approaches to healthcare across multiple providers and commissioners (NHS England, 2018a).

TCSL programmes are designed to be suitable for large scale change projects at any stage of delivery. For team-based programmes participants do not need to have prior experience of working together but they must have authority from their system to work on their project. This usually means that team membership is based upon pre-existing project or programme groups in their systems.

The collective faculty knowledge base underpinning all TCSL programmes is represented as a series of 'knowledge domains' as described in Appendix A. These are general categories of knowledge and practice viewed by the faculty as relevant to transformational change, each typically drawing upon distinct areas of the academic literature. When translated into programme content these become 'modules' (i.e. sections of related materials and associated pedagogical practices). Pratt (1980, p.4) defines a curriculum as "an organized set of formal educational and/or training intentions". The curricula for different TCSL programmes are here referred to as 'TCSL programme designs' and these are predominantly made up of combinations of modules delivered through workshops.

The creation of TCSL programme designs has historically been an iterative process using faculty group discussions to amend earlier designs. This has typically been driven by formative participant feedback or new faculty awareness of concepts relevant to transformation. Faculty discussions would typically include debate about which knowledge domains to include in a programme, the flow of this content and the pedagogical practices to be used to create the desired environment for learning and application (the latter generally based on adult learning principles as described by Knowles, Holton and Swanson, 2015 and Williams, 2016). After the agreement of a programme's design, the detailed module content would be subsequently updated by individual faculty members or created if not already in existence. Delivery of modules could be undertaken by any faculty member with typically 2-4 faculty members present at each workshop.

TCSL programmes and their precursors have been in existence since 2012. Their origins lie in work undertaken by the NHS Institute for Innovation and Improvement. This shared a range of theoretical and practical perspectives on large scale change with a group of NHS change leaders to determine empirically (based on their views) which had most relevance. This

resulted in the publication of 'Leading Large Scale Change: A practical guide' (Bevan, Plsek and Winstanley, 2013). This guide provided the starting point for me and colleagues in designing early support programmes around the time of its publication. Over the intervening years different faculty members have contributed to the evolution of the TCSL programmes and the underpinning knowledge domains. This has increasingly led to departures from the content of the early guide so that now TCSL programmes have their own distinct identity and knowledge base.

2.2 Personal context

According to Denzin and Lincoln (2003a p.279) "Objectivity is a chimera: a mythological creature that never existed, save in the imagination of those who believe that knowing can be separated from the knower". This quote offers a rationale for the assertion by Fox, Martin and Green (2007 p.187) that "practitioner researchers need first to understand themselves if they are to understand their own research". This section therefore briefly turns the focus inward towards me as a researcher.

'Self' or the 'human instrument' pervades all aspects of research from objectives to design and analysis. Knowledge of self, gained through reflexivity, can help in bracketing assumptions, biases or beliefs to account for their influence (King 2004a; Tufford and Newman, 2012). Yet self-understanding is a task of Sisyphus; never complete. All we can do is try to reflect at a point in time about what has shaped us and what we have been shaped into. We cannot hope to understand a lifetime of experience or tease one moment apart from another to find its unique contribution.

Figure 3 therefore simply tries to identify just a few shaping influences and their impacts upon me that I reflect on as important. The two are separated by a wavy line indicating a split between experience in the world and my attempt to describe what it has created within me. It is these below-the-surface elements that then have the potential to find re-expression in the world in my research and professional practice.

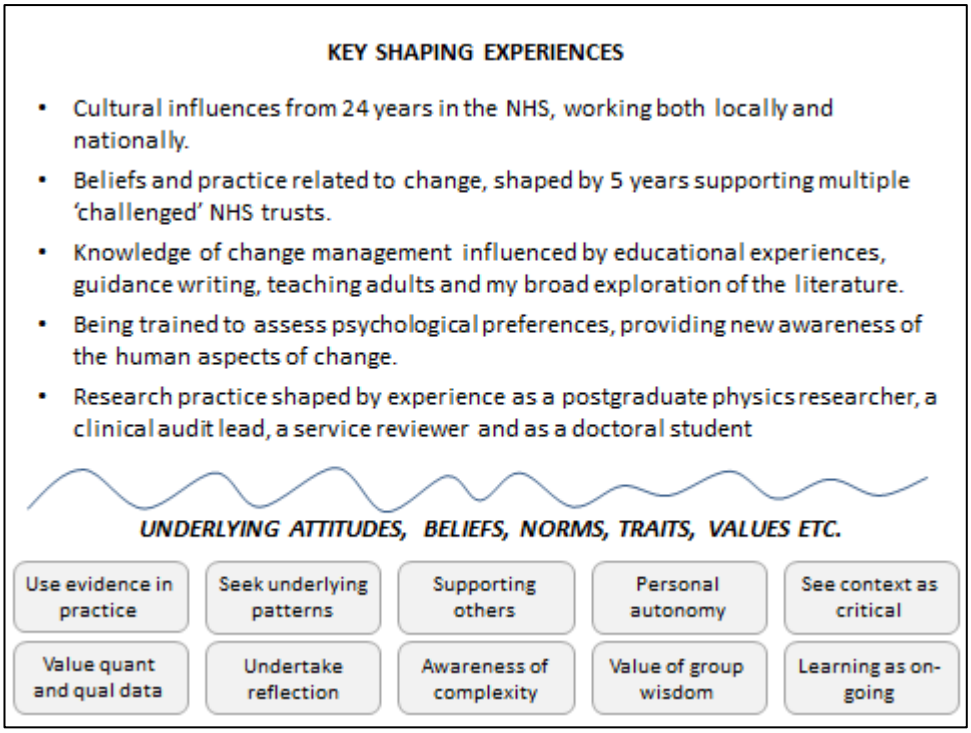


Figure 3: Underatanding the researcher

Whilst it is natural to perceive our own preferences as strengths, any strength when overdone can become a weakness (Kaplan and Kaiser, 2009). Figure 4 therefore expands upon the lower part of Figure 3 to illustrate my awareness of these weaknesses. This awareness formed the starting point for reflexivity in this research.

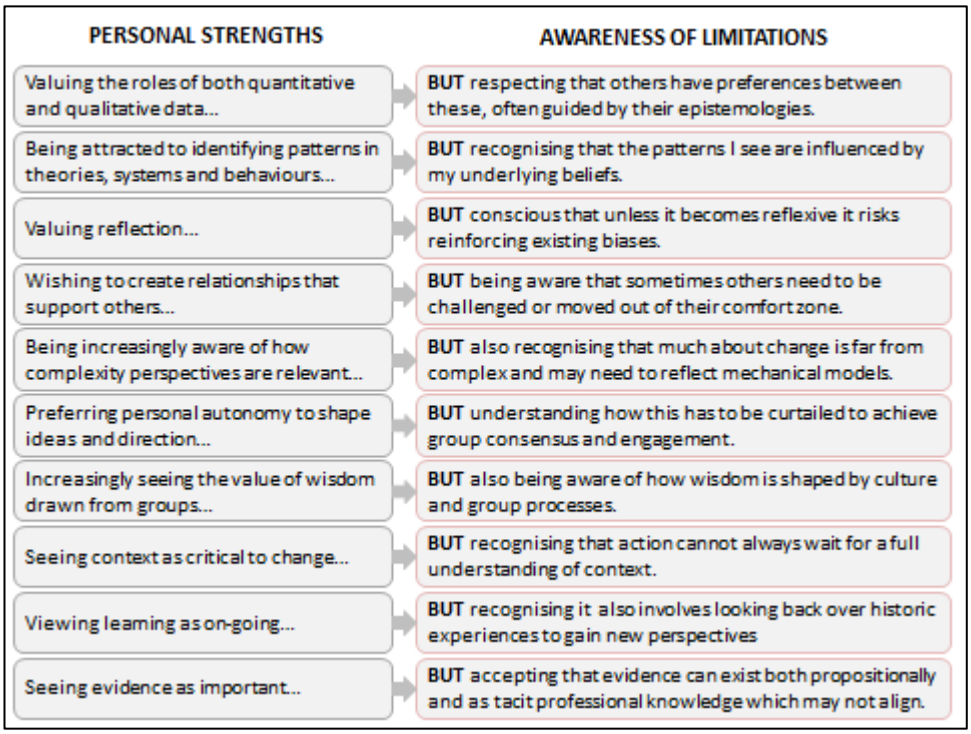


Figure 4: Awareness of the weaknesses that come from overused strengths

It is also important to note from the previous section that during the research period I was a faculty member as well as a researcher, working with colleagues in both of these capacities. How these roles interweaved and interacted is discussed separately in Section 6.2 as part of a discussion of the tensions faced in being an insider action researcher.

3 Objectives and positioning

3.1 Research objectives

This research was developed on the basis of three overall objectives.

1. To explore what is meant by transformational change in the NHS.
2. To determine what change leaders need to know in order to enact such change.
3. To shape how the ACT Academy supports these leaders in gaining and using that knowledge.

These objectives combine to underpin the core aim of this AR process. This was to build the knowledge and collective intent required by the faculty to take action to change TCSL programmes so as to improve the development of participants.

The objectives can be mapped onto four related areas of change relevant to this research. These exist in a hierarchy as shown in Figure 5.

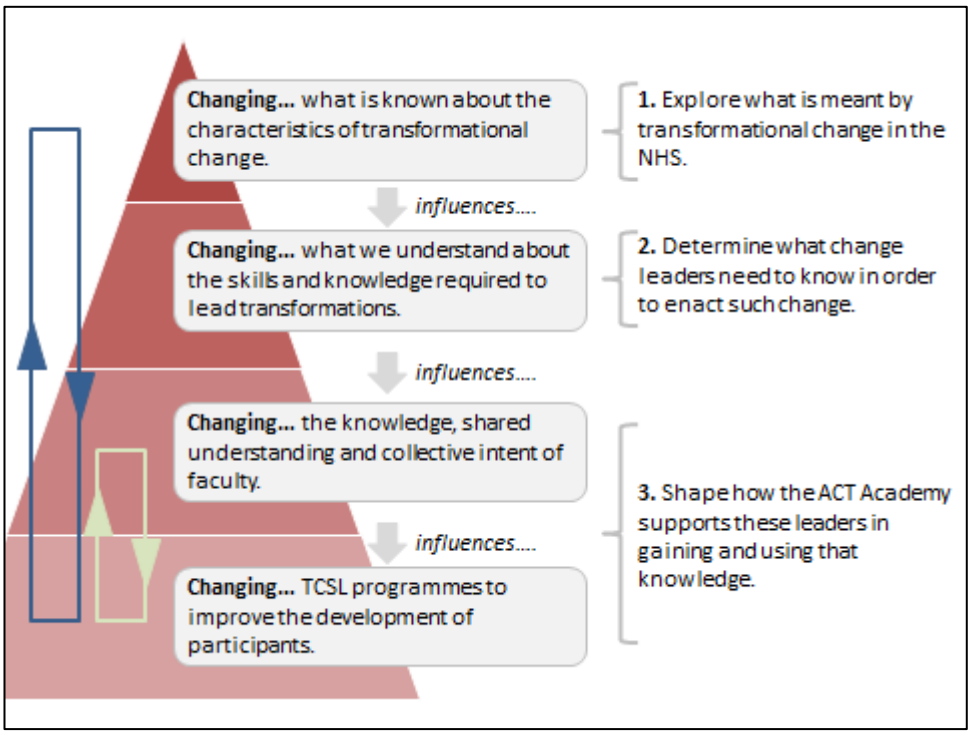


Figure 5: The research objectives and their relationship to four levels of change

In the figure there are two learning cycles shown. The longer cycle (in blue) shows how changes to TCSL programmes flow from changes in what the faculty know about transformational change. Delivery of these programmes to those involved in transformations

can also serve to shape our knowledge of transformation practice as participants engage with the content and apply it to their change projects. The smaller cycle (in grey) represents how participant experiences within a TCSL programme can relate to its pedagogical or experiential aspects rather than transformational change practice per se. As TCSL programmes are changed, learning about these aspects can be fed back to the faculty to influence future programme designs. This smaller cycle therefore acts to improve the programmes but does not reflect changes to our wider knowledge about transformational change.

As suggested earlier in Figure 1, the enquiry supporting the cycles shown in Figure 5 can take different forms. For example, knowledge of transformational change can be gained from the academic literature through processes of exploration, sense-making or integration. It can also be gained through enquiry into the practices of those involved in transformation (e.g. change experts, programme participants and faculty). Similarly, the knowledge of participant experiences of TCSL can be gained through different methods of exploration (e.g. interviews or questionnaires). All of these featured in this research.

3.2 Audiences for the research

The research objectives can also be viewed from the perspective of the audiences for this research. Coghlan and Brannick (2014) describe three types of research that they label as first, second and third person. These differentiate between enquiry and action that only involves oneself (first person), is collaborative with others involved in the action (second person) or goes beyond collaboration to share research findings with wider audiences (third person). Marshall and Reason (1993) describe these categories as research for me, us and them and suggest that research can have objectives that relate to all three audiences.

The latter terminology is applied to this research in Figure 6 to show the different audiences relevant here.

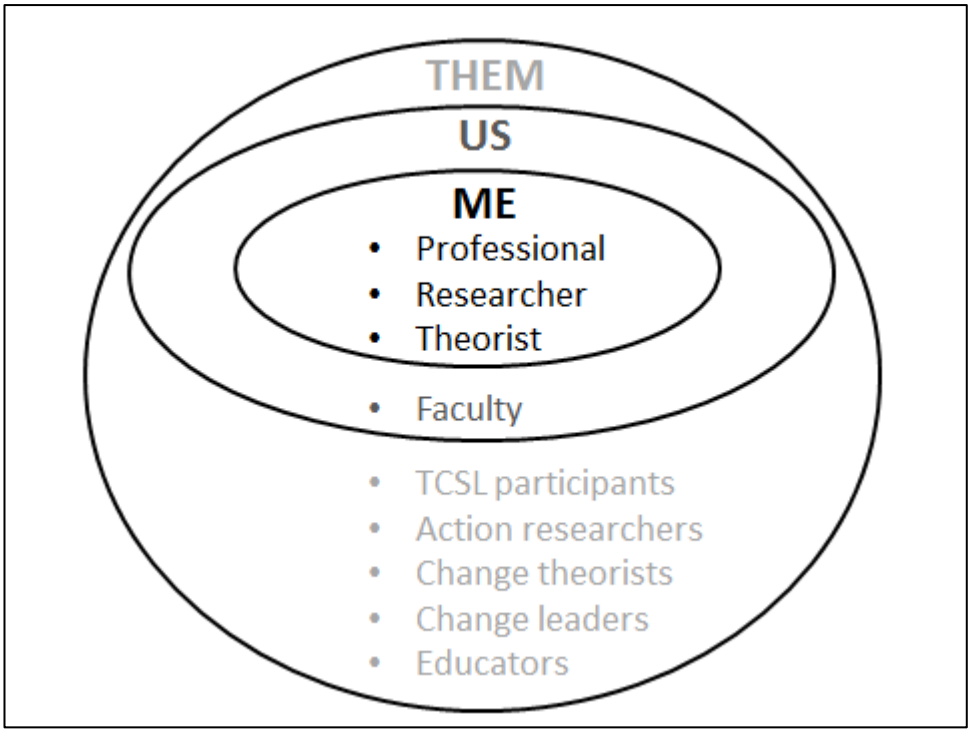


Figure 6: The different audiences for this research

Figure 6 is introduced to highlight that this research is not just about the 'us' represented by the TCSL faculty. It is also important to 'me', incorporating my goal to develop my own knowledge and practice. It may also be relevant for a wider group ('them') who share an interest in change or professional development as researchers or practitioners. The three groups shown in Figure 6 also provide the structure for the conclusions offered in Chapter 13.

Table 1 to Table 3 reflect these different audiences to expand upon the research objectives. Coghlan and Brannick (2014) refer to the articulation of the basis for action in AR as 'constructing'. These tables therefore offer a more detailed constructing of the basis for the research as a whole.

General research questions	*Expanded objectives*
Me • What do I understand by 'transformation' and how it is enacted? • What does it mean to do AR and work as an insider-researcher?	a) Develop my own understanding and articulation of the theories and capabilities relevant to transformational change. b) Apply an AR methodology and learn about the action research process.

	c) Enhance my own capacity for reflexivity.

Table 1: General research questions and expanded research objectives for 'me'

General research questions	*Expanded objectives*
Us • What action can be taken to improve the learning, application and outcomes for participants? • What do we understand to be the mechanisms and contexts affecting the use of TCSL content and its effectiveness in transformational change? • How can faculty be supported to inquire more effectively into relevant knowledge areas? • What can we learn from knowledgeable others to help shape the knowledge domains?	d) Create knowledge domains, modules and programme designs that meet the needs of the ACT Academy and TCSL participants, suitable for multiple contexts. e) Develop faculty member knowledge to support their work. f) Reflect the professional knowledge of participants and change experts in the knowledge domains, modules and programme designs.

Table 2: General research questions and expanded research objectives for 'us'

General research questions	*Expanded objectives*
Them • What transferrable knowledge or insights can the enquiry offer that might help others with an interest in transformation?	g) Create knowledge of use to others in understanding the nature of transformation and the skills required to deliver it.

Table 3: General research questions and expanded research objectives for 'them'

4 Reviewing the literature

This chapter examines two main areas of literature that have guided the design and interpretation of research activities. These focus respectively on two questions.

- What is transformational change?
- What does it mean to do action research?

Other literature of relevance to this research is discussed in later chapters as appropriate based upon the emerging requirements of the enquiries undertaken.

4.1 What is transformational change?

In Section 1.2 it was suggested that transformational change requires a new paradigm of practice, different from the mechanical metaphor underpinning incremental or small scale change. It was also stated that this paradigm has yet to fully emerge and is currently represented by an eclectic set of ideas, many drawing upon the field of complexity science.

In this section I want to explore what is meant by transformation and describe some of the range of ideas shaping its practice. I also want to draw out the implications for those like myself who are tasked with helping others who are seeking to lead transformational change.

Iles and Sutherland (2001) describe the expansive literature on change management as difficult to access for a variety of reasons. For example, it spans multiple academic disciplines (e.g. psychology, sociology etc.) and research methodologies, whilst encompassing concepts that range in scale from schools of thought to single tools. The following discussion of academic perspectives on change is therefore pragmatic, using my existing awareness of influential authors and theoretical perspectives to guide exploration. It also draws upon expansive reviews of change methodologies undertaken by others (e.g. Best et al., 2012; Levy, 1986; Stacey and Mowles, 2016; Wiggins, Marshall and Smallwood, 2016).

These reviews were identified from a search of the Middlesex University on-line library system and from references included in literature accessed for other elements of this research. Reviews were selected for their potential to offer contrasting perspectives on the change literature, recognising that no single review was likely to capture all relevant thinking

on change management or be free from conceptual biases. This diversity was reflected as follows.

- Best et al. (2012) provide a realist review of the change literature.
- Levy (1986) is recognised as a seminal paper summarising the literature describing concepts of first and second order change.
- Stacey and Mowles (2016) offer an historical view of the change literature also discussed within the context of complexity theories.
- Wiggins, Marshall and Smallwood (2016) consider the influence of ontology and epistemology on the choice of change methodologies.

This exploratory process was not intended to represent a systematic attempt to integrate finding from existing reviews. It is therefore acknowledged that the following discussions are not an exhaustive consideration of the change literature.

4.1.1 Describing an emerging paradigm for change

In the NHS, 'transformation' has become part of the language of change practice. It is viewed as synonymous with change at scale and represents an aspiration to achieve significantly improved performance through radically altering how healthcare services are provided. Whilst there is no agreed NHS definition, one applied to Canadian health services captures much of the essence of how transformation is viewed in the NHS.

> "Large-system transformations in health care are interventions aimed at coordinated, systemwide change affecting multiple organizations and care providers, with the goal of significant improvements in the efficiency of health care delivery, the quality of patient care, and population-level patient outcomes." (Best et al., 2012, p. 422)

This definition includes a number of key features. Transformation is 'coordinated' and so it includes aspects of planning and intent and thus differs from emergent system change that might result from gradual system evolution over time. It is 'systemwide' and thus typically cuts across organisational control boundaries, limiting the ability to dictate changes. Its change goals are 'significant' in that they exceed the incremental improvements that might be achieved in less transformational endeavours. Goals also span multiple objectives, here

described as ranging from 'efficiency' to 'population-level outcomes', opening up the potential for conflicting goals or ambiguity.

Transformation was initially embedded in the academic consciousness as a specific concept through the work of Linda Ackerman (1986). She focused on individual organisations and described transformation as a shift in the assumptions of those within an organisation, leading to new organisational forms that differ significantly in terms of structures, processes, culture and strategy. In later elaborating on this perspective Anderson and Anderson (2001, p. 39) define transformation as "the radical shift from one state of being to another, so significant that it requires a shift in culture, behaviour and mindset to implement successfully and sustain over time".

These views of transformation focus on change between two stable yet fundamentally dissimilar states. However as also noted by Anderson and Anderson (2001, p. 39) "the new state that results from the transformation, from a content perspective, is largely uncertain at the beginning of the change process and emerges as a product of the change effort itself". Transformation therefore has planned characteristics by virtue of those within an organisation having intent to change yet it also has emergent characteristics in that the exact form of the new state is largely unknown at the start of the change process.

Levy (1986) reviewed the change literature to examine what he described as 'second-order planned change' (using 'planned' in the sense of intentional). His descriptions appear similar to what Ackerman termed transformation. Levy's approach was to contrast it with 'first order planned change' representing incremental adjustments to an organisation or system that leaves prevailing assumptions intact.

In his review Levy found that the distinctions between first and second order change made by a wide range of scholars were not contradictory but differed in their detail. This is illustrated in Table 4 (adapted from Levy, 1986) showing different ways in which first and second order change were being contrasted in the literature.

First order change	*Second order change*
Changes in one or few components of a system	Change across many components
Change in one or two behavioural aspects	Change in all behavioural aspects

Quantitative change	Qualitative change
Incremental	Revolutionary or radical
Change within the old state	Change to create a new state

Table 4: Contrasting expressions of first and second order change

In Levy's view second order change is characterised by a break from the past, the reframing of processes and "the emergence of a new direction quantitatively and qualitatively different from the old one" (Levy, 1986 p. 14). He also suggests that second order change typically occurs as a result of failed attempts at first order change. Thus, second order change, or transformational change, represents an alternative to incremental approaches when goals cannot be achieved within the boundaries created by the prevailing organisational form or its underpinning assumptions.

A complementary attempt to delineate transformation from other types of change is offered by Mohrman (1989) focusing on the role of scale. Mohrman identifies three aspects of scale as shown in Figure 7 that are viewed as important in shaping the mechanisms employed in change programmes. These scale features have been suggested as typical of transformational programmes undertaken in the NHS (Bevan, Plsek and Winstanley 2013).

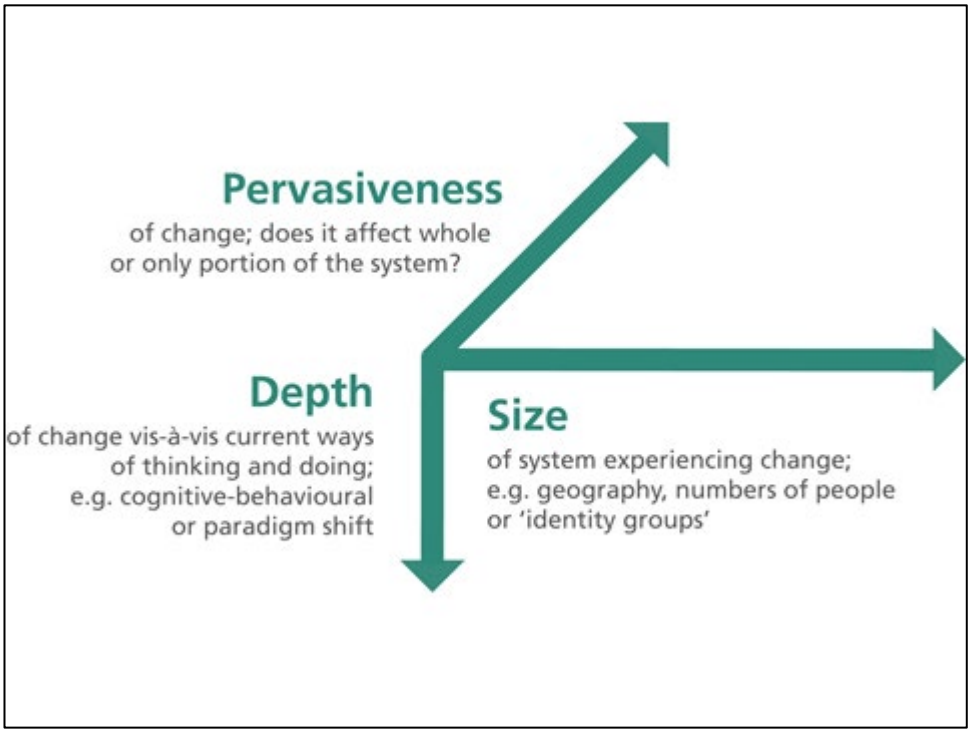


Figure 7: Scale dimensions of change

Others have also suggested that increasing scale requires a new paradigm of change this is different from the mechanical metaphor used to guide most small scale change (Dougall, Lewis and Ross 2018; Zimmerman, Lindburg and Plsek, 1998). The dimensions in Figure 7 offer reasons as to why the assumptions of predictability underpinning the mechanical metaphor become increasingly invalid at scale.

- As 'pervasiveness' increases, more system components are subject to alteration. In highly connected systems this is recognised as creating the conditions for unanticipated effects (Sweeney and Griffiths, 2002).

- Similarly, as change increasingly seeks to impact on behaviours ('depth'), human agency limits the ability to predict the outcome of change activities, resisting attempts to define clear cause and effect relationships.

- Agency also plays a part as we move to greater 'size' and encounter diverse and competing goals across different identity groups, resulting in emergent reactions to change activities.

Alongside the work of Levy and Mohrman, a wide range of authors have drawn upon different disciplines to categorise change practice in various ways, often touching upon some of the distinctions noted above. This has contributed to a diverse patchwork of interpretations (as noted by Prochaska, Prochaska and Levesque, 2001) that potentially might inform how we define, identify and enact transformational change. A few prominent views are considered here.

- Ackerman's original work on transformation (1986) also suggested other forms of change. 'Developmental' change sits comfortable on the left of Table 4 as a process of incremental improvement. In contrast, 'transitional' change denotes a larger scale replacement of the current system but with only limited shifts in underpinning mindsets. Thus Ackerman limits the importance of two of Mohrman's scale dimensions to prioritise 'depth' as signifying transformation. Ackerman therefore views some change at scale (i.e. that without mindset shifts) as not 'transformational' and possible within the planning assumptions of the mechanical metaphor.

- Heifetz, Grashow and Linsky (2009) question the emphasis on scale and would argue that it is unhelpful to view the two sides of Table 4 as applying in separate change

situations. They suggest that most change involving people, irrespective of scale, has both 'technical' and 'adaptive' elements. Technical challenges tend to be well defined with clear solutions (similar to those on the left of Table 4). Adaptive challenges (fitting more closely with the right of Table 4) are "grounded in the complexity of values, beliefs and loyalties rather than technical complexity" (ibid. p 70). Successful change is viewed as reliant on tackling both the technical and adaptive elements together.

- Snowden and Boone (2007) offer a complexity derived view on change, preferring to differentiate change activities according to four system types. In 'simple' and 'complicated' systems, change activities are amenable to planning due to system predictability. In 'complex' systems, unpredictability (as a property of a complex adaptive system) means a reliance on experimentation and pattern recognition (what Best et al. 2012 refer to as 'guided transformation'). In 'chaotic' systems the notion of planned change has no meaning, although spontaneous order may emerge from chaos. They do not make explicit reference to scale in their work. However their underpinning complexity orientation assumes complexity arises from having a large number of interacting elements. This suggests that movement along Mohrman's 'pervasiveness' or 'size' dimensions could lead to complexity and thus an inability to rely on planned approaches to change.

- Bevan, Plsek and Winstanley (2013) sidestep definitional challenges by the use of a metaphor for transformation. 'Large scale change' (presumably representing the right of Table 4) is defined through a story describing the experience of a villager who leaves his home for five years only to return to find the local river has been dammed. The villager's sense of 'wow' or disconnect from what he previously knew is defined as large scale change. Interestingly, this story also introduces an observer perspective to how change is categorised. They note that for someone in the village, who experiences the day to day construction of the dam, the change can feel incremental and so may not be perceived as transformational. The story also draws attention to how transformation can be viewed as the accumulation of many smaller changes implying the coexistence of the two halves of Table 4.

- Bushe (2013) brings the discussion of transformation into the field of organisational development (OD), drawing a distinction between traditional and dialogic OD practices. The latter take a social constructionism view of systems, focusing on

mindset changes and positioning it to the right of Table 4. His descriptions of dialogic OD also suggest aspects of emergent order in line with earlier descriptions of planned second order change (i.e. intent to change where the final form is not defined at the outset).

- Checkland and Scholes (1999) take a systems and dialogical perspective on change. They differentiate between 'hard systems' where definable objectives and solutions are possible and 'soft systems' which assume people see and interpret the world differently. Walsh and Clegg (2004) link the latter to complex systems. Overall the 'soft systems methodology' positions change (at any scale) as an exploration of different social realities, first through 'rich pictures' and later by explicitly considering different system views. The hard versus soft system may therefore be similar to the structure of Table 4.

Common across the perspectives described above is the position that different forms of change exist, with most authors drawing attention to the impact of human behaviours or the degree of system predictability. However, views appear to differ as to the role played by scale and the ontological assumptions about the separation between a system and human perceptions of that system. The views also serve to raise the question as to whether 'transformation' practice exists separately from other forms of change (i.e. small scale incremental change) or should be considered as encompassing them.

Despite these differences a growing literature, spanning multiple disciplines, has suggested various ways that change practice can move beyond the mechanical metaphor to be applied to human systems or in situations where assumptions of known cause and effect are problematic.

A number of authors use evidence of the failure of traditional change methods as a starting point. Both Grint (2008) and Keller and Price (2011) note that a high proportion of all change efforts fail and use this to argue their respective positions on change. Other authors use specific change failures to suggest alternative practices (e.g. Fuda, 2009; Keller and Aiken, 2009; Kotter, 1997; McChrystal, Collins, Silverman and Fussell, 2015). Across these authors the focus is typically on different ways to view change leadership, often suggesting that leadership has to be more widely distributed across a system. This recognises that in complex human systems, decision making and action predominantly occur in diffuse ways rather than being centrally controlled. This in turn leads to authors suggesting the need for alignment

mechanisms such as a widely adopted vision, a focus on building trust and understanding and the use of role modelling to influence others. These are typically related in the literature to practices such as the use of public narrative (Ganz, 2011), framing (Fairhurst, 2005), compassion (West, Eckert, Collins and Chowla, 2017) and requirements for authenticity and emotional intelligence (Goleman, 1996). The wider literature also includes an emphasis on the need to live with uncertainty and the potential for emergent (i.e. unplanned) system order. This leads to suggestions that change leaders should adopt experimentation as the dominant change mechanism and view change as a cyclical rather than linear process where progress is frequently assessed and new actions identified (e.g. Bevan, Plsek and Winstanley, 2013; Snowden and Boone, 2007).

Other authors take an explicit complexity perspective to offer new insights into change practices, often aligned with the points above (e.g. Glouberman and Zimmerman, 2002; Mowles, 2015; Stacey and Mowles, 2016; Sweeney and Griffiths, 2002; Westley, Zimmerman and Patton, 2007; Zimmerman, Lindburg and Plsek, 1998). Their additional complexity derived suggestions include the need for increased awareness of system history as an indicator of future behaviour patterns, the importance of surfacing competing goals amongst stakeholders and the view that system change is facilitated through increasing connections between system agents (i.e. people).

The complexity perspective has also led to interest in the role of 'simple rules' (or minimum specifications) as a way to guide system change (Zimmerman, Lindburg and Plsek, 1998). This concept builds upon the observation that complex patterned behaviours in nature can be successfully modelled using only a small number of basic rules (e.g. the flocking of birds modelled by Reynolds, 1987).

Whilst simple rules are suggested as a bespoke way to help shape individual systems, Best et al. (2012) have used this idea as the basis for a realist review of the change literature to try and inform transformation practice across healthcare systems. Their review, which eventually included detailed examination of 84 papers, identified that transformation practice should be based upon five simple rules.

- Leadership should be both designated (i.e. with someone formally in charge) and distributed (i.e. with widely shared responsibility for the programme of change), supported through mechanisms such as the use of a vision.

- Feedback loops should be established with the involvement of stakeholders to monitor progress towards the change goals (suggestive of the cyclical change process described above).

- Efforts should be made to learn from history, using this to ground new change initiatives in valued ideas and activities.

- Clinicians (and in particular doctors) should be involved in the change processes as influential stakeholders.

- Patients and families should also be involved as a way of helping to align activities around patient needs.

These simple rules are in keeping with the points noted earlier but include some that clearly reflect the unique context of healthcare.

Across the various perspectives described in this section it appears that transformation exists as a concept that is somehow different from other forms of change and therefore requiring new approaches to how it is led and delivered. However, these perspectives do not yet represent a coherent change methodology or paradigm that might rival those well-established within the mechanical metaphor (e.g. the science of improvement described by Langley, Moen, Nolan, Nolan, Norman and Provost, 2009).

In part this might be because, as noted by Pfeffer (1993, p. 599), the academic literature relating to organisational change welcomes theoretical and methodological diversity rather than the alignment of competing perspectives. He views this literature as fragmented and "paradigmatically not well developed".

Another potential reason is that the existing mechanical metaphor offers a powerful, self-consistent paradigm. Its power is in its familiarity and how the metaphor provides an accessible anchor to shape how we describe organisations and systems (e.g. as noted by Morgan, 1997, and Grant and Oswick, 1996). This metaphor also has appeal because it portrays a rational world and offers a logical approach to determining how to enact change. As Kotter (2014) points out, we experience organisations in their everyday functioning as if they are machines, repetitively delivering outcomes based on processes with little variation. It is therefore understandable that we attempt to change them as if they are machines.

To replace the mechanical metaphor we need an alternative that both aligns with our experience of the world and provides an accessible and useful guide to transformation practice. As yet candidate metaphors or paradigms are hard to identify amongst the theoretical pluralism of the literature (as described by Van de Ven and Poole, 1995). As noted earlier, complexity is favoured by some as a potential paradigm yet the field itself is still the subject of academic debate (Patton, 2011) and its implications as a science or metaphor unclear (Burnes, 2005).

Transformation therefore suffers from a crisis of identity where a replacement for the mechanical metaphor may be required, yet this replacement is hard to uniquely identify.

Offering a coherent view of transformation is also complicated by the existence of paradox. With reference to the idea that large scale change is comprised of many smaller changes, Heifetz, Grashow and Linsky (2009) describe how change leaders need to move between the 'balcony' and the 'dance floor', between the big picture and the detail. This involves adopting sometimes contradictory ways of leading change. Mowles (2015) views these different positions as relevant yet presents their existence as an unresolvable paradox. He suggests that leaders cannot step outside of their system and transition to the 'balcony'. Therefore for Mowles, transformation or leadership practice in complex change is centred upon increasing personal reflexivity, becoming aware of paradox and our actions within it.

Seo, Putnam and Bartunek (2004) take a wider view on the role of paradox to suggest that all change practice reflects choices between the various paradoxes shown in Figure 8. Thus, the varied perspectives on change described earlier (and the general theoretical pluralism seen in relation to transformation) may also represent different positions on these or other paradoxes, each creating their own implications for change practice.

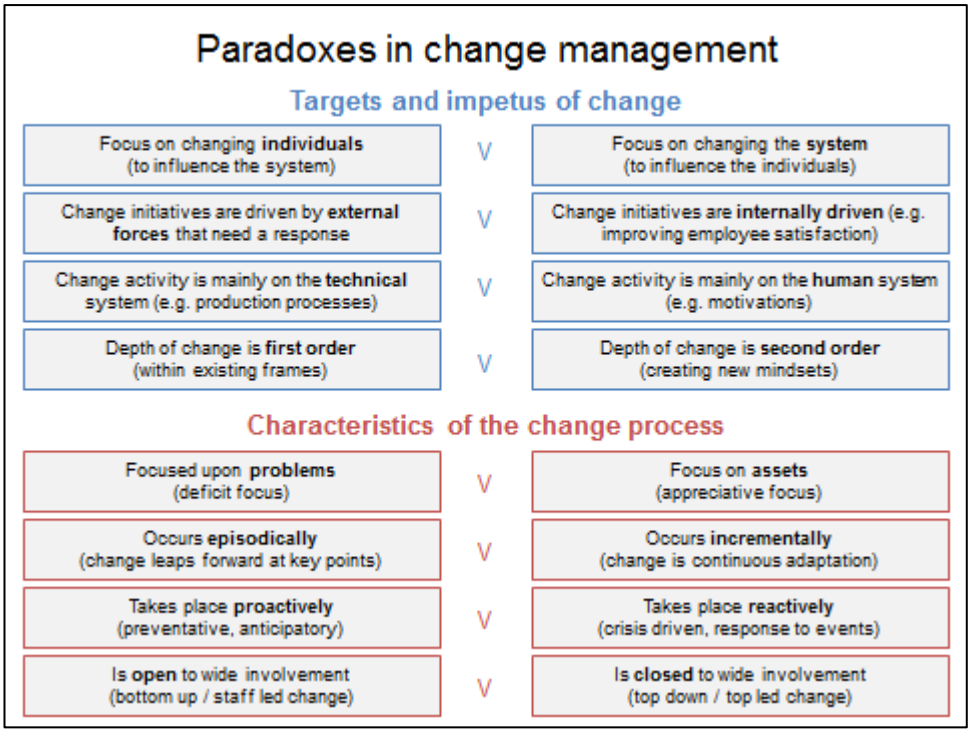


Figure 8: Paradoxes reflected in change management

Building on this view, Wiggins, Marshall and Smallwood (2016) suggest that successful change practice requires a pluralistic approach, moving between different contradictory perspectives. They therefore see change leaders as attempting to transcend the paradoxes of Figure 8 potentially through the reflexivity advocated by Mowles (2015). As noted in Section 1.2, Grint (2008) makes much the same point in relation to 'wicked problems' suggesting that they require a pragmatic change process akin to bricolage, responding to an evolving problem and context whilst we question our understanding of both.

In summary therefore, the concept and practice of 'transformation' is beset with difficulties. Whilst it appears that there is a case to define transformation as quantitatively and qualitatively different from smaller scale change, its exact nature is unclear. It appears to be characterised by a lack of predictable relationships between cause and effect, often linked to the involvement of people in such change processes. Its somewhat vague identity has in part been the result of theoretical pluralism although this has not prevented some alignment around the practices involved in transformation such as the need to work within a distributed leadership model. Going forward the question needs to be asked as to whether a guiding metaphor or paradigm for transformation can be found. Complexity science appears as a candidate favoured by many authors yet its transferability into the world of organisations is unclear. Other authors suggest that the paradoxical nature of change practice means that any new paradigm would itself have to be one of pluralism.

4.1.2 Seeking to define transformational change

The previous section suggests that the term 'transformational change' has meaning and relevance to change in the NHS but its exact form, identity and practices are unclear. For programmes like TCSL this creates a choice between adopting a specific academic perspective, knowing that others have seen the need to describe change differently, or seeking to navigate a course between perspectives much like the view expressed by Wiggins, Marshall and Smallwood (2016).

This latter transtheoretcial route has been chosen by the faculty in developing the knowledge domains, using our professional experience as a compass to guide our practice. This navigation continues as a major part of this research. To use Grint's terminology (2008), we have engaged in creating our own 'clumsy solutions' in response to the messiness of the situation we have faced, drawing upon the academic literature and our interpretation of this to find a way forward.

To conclude this section, I therefore want to offer two perspectives that serve to summarise the ACT Academy perspective on transformation. The first in Figure 9 shows a slide used in TCSL programmes to suggest some of the differences in a leader's focus when considering small scale improvement versus transformation. In the context of TCSL programmes this is presented with acknowledgement of the paradox of practice described above (i.e. the paradoxical need for both approaches).

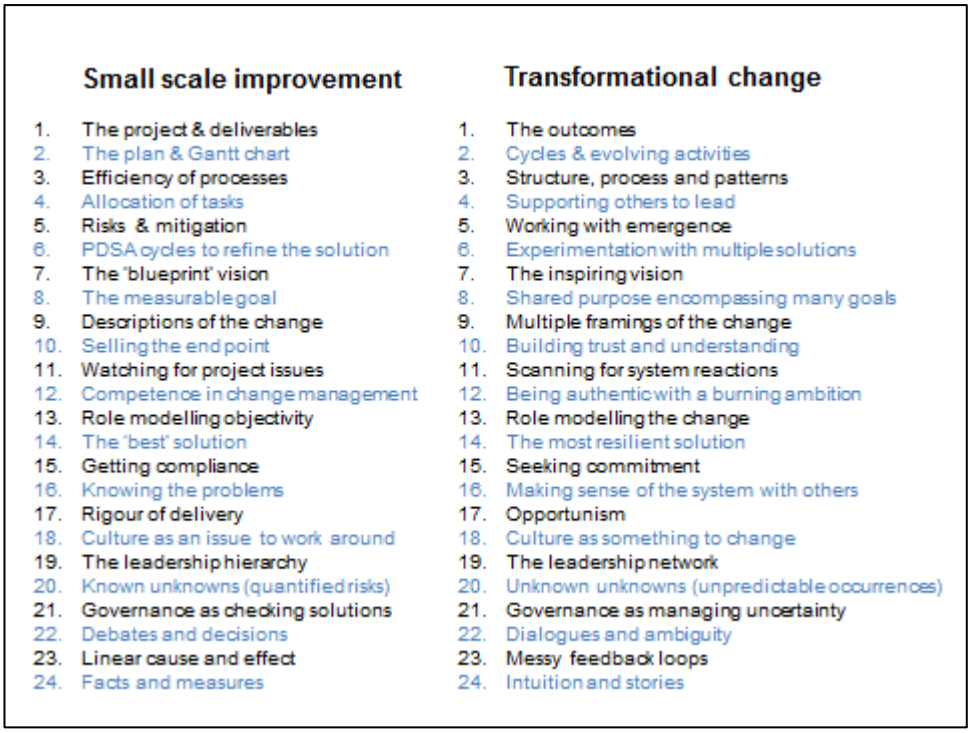


Figure 9: Contrasting small scale improvement and transformational change

The second perspective is shown in Figure 10 (ACT Academy, 2018b) which offers our own faculty definition of transformational change developed during this research (Section 12.3). This incorporates many of the features discussed here, for example highlighting the aspiration for a radically different state and the implications of working with uncertainty and limited levers of control. It also suggests some of the change mechanisms (such as alignment) viewed by faculty as important in transformation.

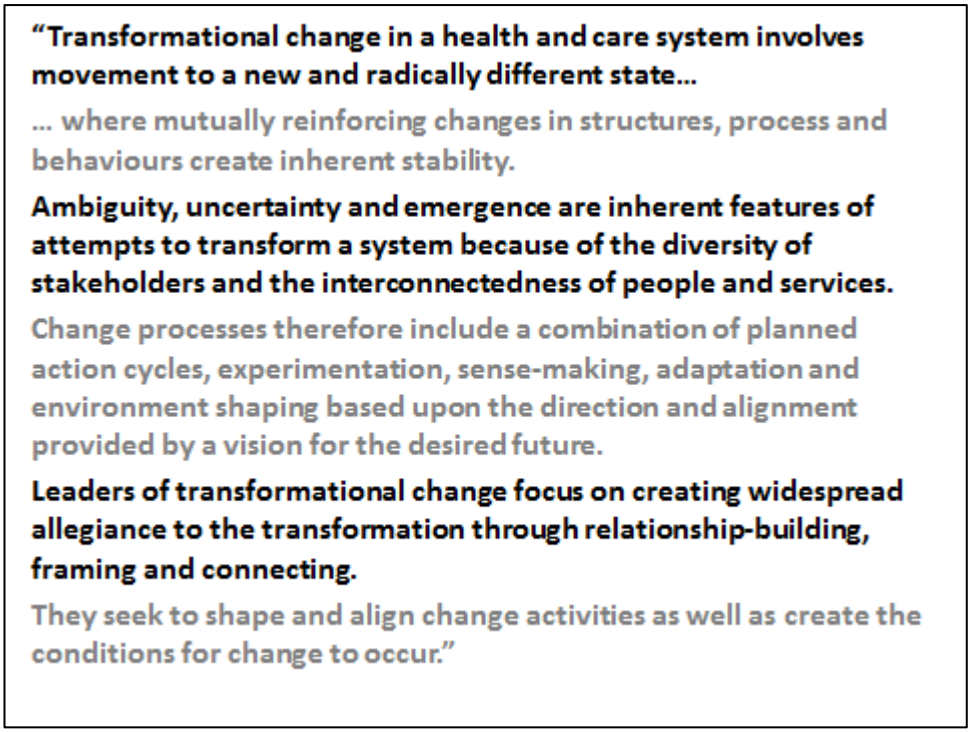


Figure 10: The ACT Academy definition of transformation

4.2 What does it mean to do action research?

This section investigates what it means to do AR by reviewing the literature. This then forms the basis for a model of practice employed in this research.

The application of AR in systems exhibiting complexity is also considered. It is argued that AR can be applied to the types of unstructured problems found in such systems but requires a shift in emphasis away from assumptions of predictability towards the creation of actionable knowledge. This shift is in line with the earlier cyclical model introduced as Figure 1.

4.2.1 The field of action research

The origins of AR can be traced to the period around the Second World War and the work of the Tavistock Institute in London and Kurt Lewin in America (Williamson and Prosser 2002). In both cases there was an interest in applying research principles to social change.

Although AR has no universally accepted definition (Koshy, Koshy and Waterman, 2010), it is suggested that the most often quoted description is by Rapoport (Susman and Evered, 1978). This views AR as aiming to "contribute both to the practical concerns of people in an immediate problematic situation and to the goals of social science by joint collaboration

within a mutually acceptable ethical framework" (Rapoport 1970 p.499). It therefore brings together a researcher and a community with mutual benefit for both.

Alternative definitions can be found in the literature with examples shown in Table 5.

"A family of related approaches that integrate theory and action with a goal of addressing important organizational, community and social issues together with those who experience them" (Coghlan and Brannick, 2014 p. xix)
"The way groups of people can organize the conditions under which they can learn from their own experiences and make this experience accessible to others" (McTaggart, 1991 p.170)
"Research in which the validity and value of research results are tested through collaborative insider-professional researcher knowledge generation and application processes in projects of social change that aim to increase fairness, wellness, and self-determination" (Greenwood and Levin, 2003 p. 145)
"A process whereby, through the collection and interpretation of data, in light of personal reflection and self-evaluation, individuals can establish 'situational understanding', as the basis for action which integrates practical aims with moral understanding" (Elliot 1993 cited in Somerkh 2006 p. 13)
"Collaboratively constructed descriptions and interpretations of events that enable groups of people to formulate mutually acceptable solutions to their problems" (Stringer 1999, p. 188)
"Evaluating your practice to check whether it is as good as you would like it to be, identifying any areas that you feel need improving, and finding ways to improve them" (McNiff, 2016 p. 9)

Table 5: Different definitions of action research

These competing definitions illustrate how AR has grown into a diverse field as different aspects of practice are emphasised. However, it is generally accepted that AR retains an

identity that can be described in terms of its core attributes (Heller, 2004) with sufficient coherence to represent a methodology (McNiff, 2016). A number of attributes are readily identifiable across the literature (Heller 2004; Koshy, Koshy and Waterman, 2010; Mårtensson and Lee, 2004; Reason and Bradbury, 2005).

1. A close relationship between acquiring knowledge and taking action.
2. The use of cycles characterised by planning, action and evaluation based upon the perceived characteristics of a problematic situation.
3. The involvement of those close to the situation in all or some aspects of the research process.
4. Recognising the researcher as a central component of the research process (i.e. moving away from notions of the unbiased observer).
5. A connection to an ethical and moral value base.

AR is therefore a process that brings a research orientation to real-world problems in ways that involve those close to them. It carries with it ethical expectations, high researcher involvement and a cyclical approach to planning, action and learning.

The nature of the problems tackled within an AR process are not specified within Rapoport's definition or those of Table 5. At a macro level, a problem might be represented by the primary goal or issue facing a group. AR might then focus on the iterative movement towards a solution, staying at the level of the presenting problem and the action plan to address it. At a deeper level, AR may also need to operate on what might be called 'the problems within the problem'. For example, dealing with inadequacies in group knowledge that limit their ability to identify actions, managing differences in perspective on the problem, or working through the challenges of group dynamics.

This nested or fractal nature of AR can be thought of as a response to the complicated nature of real-world problems. According to Ackoff (1979 p. 99) "Managers are not confronted with problems that are independent of each other, but with dynamic situations that consist of complex systems of changing problems that interact with each other. I call such situations messes". Therefore, AR does not ignore the 'messiness' of real life problems and instead brings a research orientation to learning and action within them. This also reflects Schön's view of the need to work in the "swampy lowlands" of real practice (1983, p.42). In these lowlands, AR is not restricted to a simplistic deductive review of whether actions achieved

their intended goals but also has to be combined with inductive processes that generate knowledge (or theory) about a problem or how we are solving that problem. This inductive process that supports AR was shown earlier in Figure 1.

This 'messiness' of AR is also referred to by Stringer (1999), noting its implication that it is necessary to accept the validity of the knowledge held by those involved in the research process. He states that AR "is based on the assumption that knowledge inherent in people's every day, taken for granted lives has as much validity and utility as knowledge linked to the concepts and theories of the academic disciplines or bureaucratic policies and procedures." (ibid., p. 167). AR in its orientation towards real-world change is therefore also oriented towards valuing and respecting the views of those participating in AR processes.

With this connection to the messiness of real-world problems it is unsurprising that AR practice has evolved into diverse forms. McNiff (2016 p.33) describes the AR field as characterised by "tribalism" and "territorialism". In part this is epistemologically driven, shaped by the different ways researchers believe we should come to know and work with the world around us. It also reflects different values or ethical principles applied by researchers. For example, early in its history AR was applied to support the emancipation of disadvantaged groups. This value-based position became embedded in practice for some researchers, taking on the identity of 'participatory action research'.

In the enquiry processes used here, a more modest view of emancipation and AR has been adopted. In line with Somerkh (2006) the AR researcher's role is seen as supporting communities to learn in ways that respects others' values and views on reality. This is fitting for a context where shared learning rather than an explicit need for empowerment is reflected in the research objectives (Section 3.1).

Working with others in problem situations to affect change has also meant that the traditional distinctions between researcher and participant are questioned in AR. In their model of 'dialogical action research' Mårtensson and Lee (2004) describe a dialogue between these groups that values and develops the knowledge of both. Robson (2011) takes this further and advocates treating participants as co-researchers throughout the AR process. Chein, Cook and Harding (1948) explore how participant and researcher relationships at different stages of the AR cycle can be used to characterise different types of AR.

Others have also suggested ways to categorise AR practice. Rearick and Feldman (1999) suggest locating different AR practices according to the researcher's theoretical orientation,

the purpose of the enquiry and the mode of reflective practice employed. Their 'theoretical' dimension is split according to the relative AR focus on evidence-based action ('technical'), understanding practice ('practical') or empowerment ('emancipation'). The 'purpose' dimension is divided according to the goal of the research. This goal can be professional (i.e. workplace change), personal growth or political (e.g. advancing social agendas). Their reflection dimension echoes the categories of 'me, us and them' defined by Marshall and Reason (1993) by classifying AR according to where reflective practice occurs. They differentiate between autobiographical (me), collaborative (us) and communal (them or wider society).

Whilst this taxonomy is descriptively helpful to distinguish different aspects of AR, it ignores any temporal changes that could occur within the course of a programme of change and enquiry. In reality AR takes place over multiple cycles spread out over time, potentially encompassing multiple and evolving goals and shifting between different reflective modes. It is therefore suggested here that the taxonomy is more useful as a tool to reflect on the decisions made about how an AR project evolves over time (as will be further discussed shortly).

4.2.2 Describing the action research cycle

The cyclical nature of AR appears in various forms in the literature but generally adheres to similar structures (Stringer, 1999). Coghlan and Brannick (2014) offer a four-stage model comprised of constructing, planning actions based upon these constructs, taking action and evaluating that action. The term 'constructing' refers to a process of revealing the different truths and realities held by individuals and groups. It therefore fulfils a collective diagnostic or sense-making function that provides a basis for planning.

Whilst 'evaluating action' provides for a reflective process at the end of a cycle, Coghlan and Brannick (ibid.) also suggest that another cyclical reflective process (that they call the 'general empirical method') applies at each stage of the AR cycle. This embodies Schön's (1983) notion of the reflective practitioner and 'reflection-in-action'. Their AR cycle (black) and the reflective process (grey) are shown in Figure 11. These two cycles operate in different ways. Whilst the main AR cycle operates deductively to compare outcomes with intentions, the smaller reflective cycle is akin to the more inductive Kolb learning cycle (1984). This uses experience of the processes employed in each stage as a basis for revising actions within that stage.

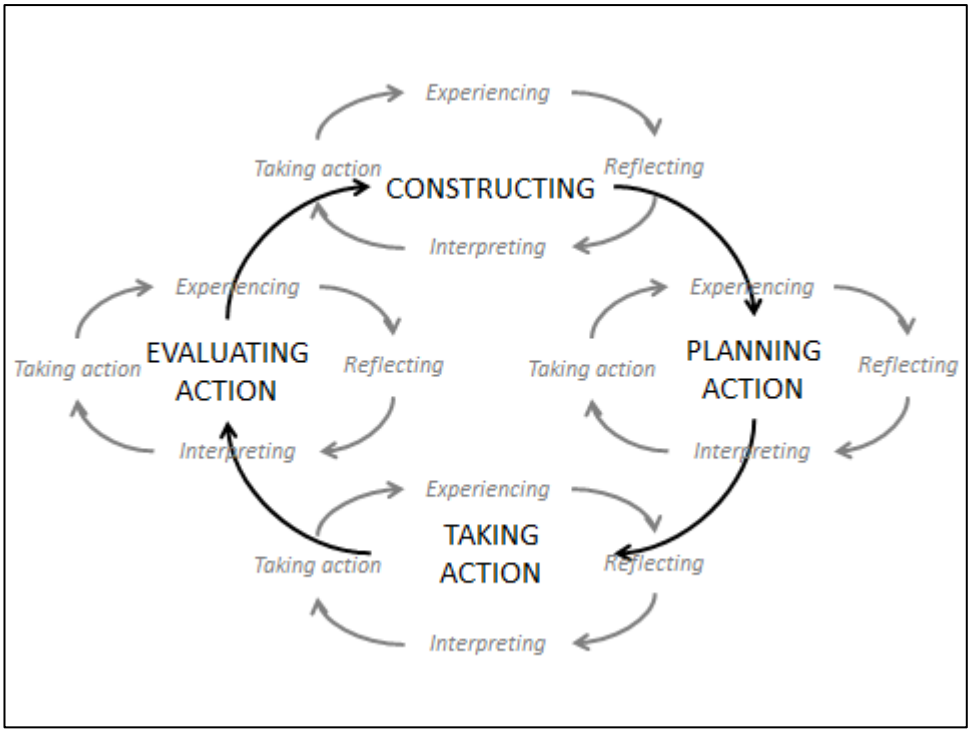


Figure 11: The action research cycle and general empirical method

The main cycle of Figure 11 can be compared to the earlier cycle shown in Figure 1. The latter had a deductive process of hypotheses creation leading to a test of those hypotheses through data generation. This data then also served as the basis for an inductive process to create new theories and hypotheses for testing. This cyclical process also occurs in Figure 11. Constructing offers a theory creation process where hypotheses take the form of planned actions. Enacting these becomes a deductive test of the hypotheses. Evaluation then serves to report the outcome of that test whilst also generating data to feed new theory creation and further AR cycles. Figure 11 is therefore very similar to Figure 1 as deductive stages feed into an inductive process that provides the starting point for a new cycle. The main difference here is that in Figure 1 attention is also paid to generating additional inductively derived learning from other sources that can also be introduced into the AR cycles.

The taxonomy of Rearick and Feldman (1999) and cycles of Figure 11 can be adapted and combined to produce the conceptual model for AR that has informed this research (Figure 12). It depicts a range of considerations undertaken in each AR cycle.

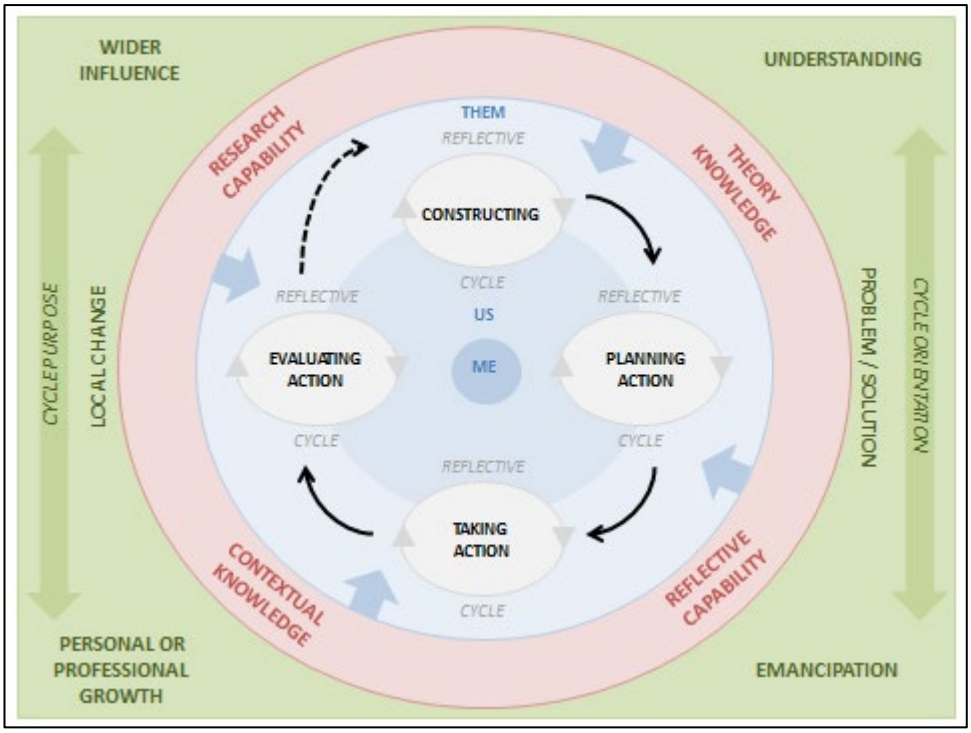


Figure 12: A conceptual model of the action research process

The blue shaded rings are based on the taxonomy categories of reflection suggested by Rearick and Feldman (1999) using the terminology of audiences described by Marshall and Reason (1993). These rings are intended to suggest two core questions for each step in an AR cycle about who is involved and who is engaged in reflection within the cycle.

The outside elements in green represent choices to be made about the focus of each cycle. They add a personal interpretation to build upon the two remaining dimensions of Rearick and Feldman (1999). On the left are choices about the main purposes of the cycle. This includes personal or professional growth (for the researcher or participants), local change or ambitions for wider influence. To the right are choices about the orientation of the cycle. This includes whether it is focused on solving problems, emancipatory aims or a desire to create understanding. These choices are not mutually exclusive but instead aid exploration of the rationale underpinning a cycle.

The outer pink ring is not derived from the work of these authors but is added to signify the need to consider what I (as the main researcher) or participants are expected to bring to the cycle as personal skills or resources. Here this is categorised according to the shaping of research processes, aiding reflective practice, supplying knowledge of relevant theories or offering knowledge of local context. This is used to help illuminate roles and expectations within the AR cycle.

The figure also has inward facing arrows shown in blue that represent the wider learning taken from each cycle. This includes the 'meta-learning' described by Coghlan and Brannick (2014) where a cycle is considered in the context of the wider research objectives and AR processes. It also includes the challenging of assumptions that are driving the AR process. The need for such challenge is reflected in the work of various authors. For example Mezirow's (1991) 'premise' reflections, the 'double loop learning' of Argyris (1976) and McNiff's (2006) 'critical reflexivity' (i.e. awareness of how one thinks) and 'dialectical reflexivity' (i.e. awareness of the wider social and other factors that influence how one thinks).

Learning and reflection in AR is therefore a multi-layered endeavour that is captured in Figure 12 in various ways as:

- reflection-in-action that applies at each stage in the cycle to aid adjustments to the action taken in that stage;
- more broadly, the evaluation that considers the outcomes of the cycle actions and the learning from undertaking the activities within the cycle; and
- more broadly still, meta-learning and premise reflections that consider the presuppositions underpinning the cycle and its relationship to other cycles in the wider context of the whole research.

The model in Figure 12 is conceptual. Its practical value lies in the questions it generates to shape the design of AR cycles and the reflections within them. The questions used throughout this research in relation to its cycles have included the following.

- What is the orientation of the cycle in relation to solving a problem, creating understanding and supporting emancipation?
- What goals exist in the cycle relating to workplace change, personal and professional growth or influencing a wider community?
- What researcher or participant resources are required to deliver the four stages of the AR cycle?
- Who needs to be involved in each stage of the AR cycle?
- How will the cycle incorporate reflection and who will be reflecting?

- How will wider learning relating to the research objectives or the AR process be identified?

- What learning has the cycle generated about the problematic situation, our assumptions about it or how we are addressing it?

4.2.3 The application of action research in complex systems

The cyclical process at the heart of AR and the potential underpinning assumptions about cause and effect are not without their critics. Radford (2007) argues that such AR models can be implicitly reductionist, adopting the predictability assumptions of the mechanical metaphor described in Section 4.1. In offering a complexity perspective, Radford challenges this reductionism instead suggesting "research, rather than invariably interventionist, needs to draw back to a more descriptive, explanatory and critical role" (ibid. p.265). In saying this Radford explicitly equates practice to art, suggesting that 'critique' acts to build knowledge but does not seek to direct the practice of the artist.

This view seemingly offers a subtle repositioning of the process of AR in complex systems to focus on the way knowledge creation can be used to inform future decisions rather than as a process of measuring whether outcomes conform to a plan. It shifts from a focus on prediction to the creation of actionable knowledge. This could be thought of as a shift in emphasis from the deductive path in Figure 1, representing a view of AR as theory testing, to the inductive path shown alongside it.

Others also take a complexity perspective on AR, offering their own views on its implications for the cyclical process.

- Phelps and Graham (2010 p.187) support the relevance of AR in complex settings stating "Rather than trying to predict the outcomes of interventions, action researchers are perhaps more accurately involved in evoking, welcoming and better understanding change processes, without needing to try and establish simple causal connections".

- This 'evoking' activity is equated by Phelps and Hase (2002, p. 513) to the complexity concept of 'noise' in systems. They state, "Action research is, in fact, a process of actively producing 'noise' as it challenges individuals to reflect on new ideas, concepts and theories and to engage in action aimed toward change". For them, the 'noise' is new knowledge stating "The intended result of action research is, thus, the

construction of new knowledge on which new forms of action can be based… a cyclical process in which action contributes to knowledge and knowledge alters action" (ibid., p. 514).

- Grønhaug and Olson (1999 p.10) describe this as a long-term iterative process noting that "it takes time for the actors to acquire new knowledge, or more precisely, to change their cognitive structures in such a way that their reality constructions change". Davis and Sumara (2005, p.459) see this as a process to "prompt ideas to interact and be knitted into more sophisticated possibilities" where the "interpretations that are generated cannot be completely pre-stated, but must be allowed to unfold" (ibid. p.460). Burns (2013 p. 7) notes that this requires AR where there are "multiple inquiries connected horizontally and vertically" where the researcher is seeking a 'resonance' that leads to action.

Like many arguments that seek to recast older practices in a new light, the points above can be seen as recognition of what AR practitioners have been doing anyway. Historically AR has not just been a process that develops a change hypothesis, acts and then seeks to understand deviations from the plan. It has also been about helping groups make sense of new knowledge, influencing multiple and diverse actions and then gaining new knowledge from that experience. It has combined the deductive and inductive to do what Phelps and Graham (2010 p.189) call "facilitating informed emergence – collective recognition of the need to continually learn and adapt to changing environments".

In this research, the starting point is one where there is a lack of a firm theoretical foundation about transformational change and thus theory generation primarily occurs through the revealing and sense-making of faculty perspectives. It is therefore one where the content and design of TCSL programmes are intimately bound to the professional knowledge and experiences of the faculty. This has prompted a more complexity informed attitude to the AR process. In particular, this research has included a focus on the need to support the faculty in building, shaping and sharing our collective knowledge about transformation and the programmes we are co-creating. It has tried to create 'informed emergence' through its AR cycles by also connecting them to other forms of knowledge generating enquiry (as will be described in Chapter 8). The cyclical model of Figure 12 has remained valid and forms the basis for Chapters 9 to 12 but it has also been viewed through this complexity informed lens.

4.2.4 Structuring the narrative of action research

The stages of the AR process shown in Figure 12 provide a logical description of the cyclical AR process. However, the real-world messiness described by Ackoff (1979) means that it is not always appropriate to view these stages as a strictly linear sequence. For example, whilst 'constructing' forms the basis for 'planning action' the dialogic act of planning can reveal previously unidentified assumptions or project constraints. Iteration may therefore occur between these first two stages. This may reflect why some depictions of the AR cycle, such as those originally offered by Lewin (1946), do not distinguish between these two stages, limiting AR to a three-stage process. Similarly, as expressed in Figure 1, 'evaluating action' can be seen as both the deductive activity of determining if actions achieved an intended outcome and as the inductive activity that provides theory to shape future AR cycles. This evaluative stage can therefore itself include aspects of constructing and may even extend into consideration of future actions. This also reflects the complexity perspective outlined in the previous section which suggested a more nuanced view of the reflective evaluative process in AR.

This overlap or iteration between the stages of Figure 12 does not invalidate the model as a conceptual representation of the research and action process. It does however mean that in practice the distinction between the stages can be blurred. From both the research and practitioner perspective this is not generally problematic since the purpose of AR is not to avoid such blurring and artificially create a separation of stages, but rather to recognise it as occurring and ensure the cyclical process is enacted.

Such blurring does however present a challenge for how to present the narrative account of the action and enquiry processes. To address this challenge, this report has taken a pragmatic stance in later chapters. These divide the research into three phases reported in Chapters 9 to 11. As each phase represented a new organisational context for the work of the ACT Academy this context is explained much like the AR 'pre-step' suggested by Coghlan and Brannick (2014). Within the AR cycles described in these chapters the four stages shown in Figure 12 are used as section headings to give an indication of the general stage that is being discussed. In practice however the division of content between these stages is imprecise. This is most evident in overlaps between the content described in 'constructing' and 'planning action' where the latter is used to capture the planning processes linked to TCSL programme design. These were inevitably also a process of sense-making and exploration where the problem to be addressed was co-constructed in the act of solving it. Similar

pragmatism has been applied to combine the 'taking action' and 'evaluation' stages into a single narrative in each cycle. For these, the short action period of actual delivery (i.e. a few workshop days) and the well-defined nature of this action make it logical to consider action and reflection on this action together.

How was the research designed and implemented?

5 Research design

5.1 Research paradigm

This research adopted a mixed methods action research based methodology founded upon pragmatic and realist positions.

According to Guba and Lincoln (1994) a research paradigm is defined by a researcher's beliefs about ontology (the nature of reality), epistemology (what can be known) and methodology (the way of knowing). More recently, Denzin and Lincoln (2003) have suggested adding axiology (e.g. values). The research paradigm in turn influences methods. Historically this definition of a research paradigm has led to polarised comparisons. Positivist paradigms (i.e. an objective reality) typified by the use of quantitative data have been contrasted with constructivist or interpretivist paradigms (i.e. multiple constructed realities) usually reliant on qualitative data. This led to the 'incompatibility thesis' that asserts quantitative and qualitative methods cannot be combined as they represent conflicting paradigms (as described by Howe, 1988).

It is now widely recognised that the presumed incompatibility of methods had arisen from conflating views on the types of data typically used in specific paradigms with the paradigms themselves (Denzin and Lincoln, 2003; Mertens, 2015; Howe, 1988). There is also recognition that there are alternatives to Guba and Lincoln's (1994) taxonomy of paradigms that can help to identify less diametric opposed positions (Morgan, 2007).

Various authors (e.g. Howe, 1988; Johnson, Onwuegbuzie and Turner, 2007) suggest 'pragmatism' as a paradigm or set of beliefs that transcends the quantitative qualitative divide. In pragmatism the research question serves to guide the choice of methods (e.g. the questions underpinning this research as described in Section 3.1). Methods arise from a reflective process that links the enquiry to the action that may arise from it "in a way that offers the best chance to obtain useful answers" (Johnson and Onwuegbuzie, 2004 p.17) in a "continual back-and-forth movement between beliefs and actions" (Morgan 2014, p.1049). Johnson and Onwuegbuzie (2004 p.18) go on to describe this process as akin to natural human enquiry where we "try out things to see what works, what solves problems… [moving] us towards larger truths".

Pragmatism is therefore attractive in this enquiry process for its methodological flexibility, its applicability to multiple (and evolving) research questions and its strong connection to reflection and action.

Robson (2011) suggests that 'realism' offers a complimentary perspective to pragmatism. Fox, Martin and Green (2007 p.70) describe it as a position that "combines a scientific way of thinking with recognition of the context and uniqueness of human behaviour". Realism encompasses a broad ontology, suggesting that reality can be both 'real' and socially constructed with different layers of social reality. This is what Willig (2016 p.33) refers to as "ontological realism together with epistemological relativism".

Realism further offers a language of causality that is explored in Appendix B for its relevance to this research. This language describes programmes as patterns of 'context, mechanism and outcome configurations', representing the underlying ways in which programmes lead to outcomes (Pawson and Tilley, 2004). As noted by Hartley (2004) the identification of these 'CMO configurations' has the potential for analytic generalisation from case studies, allowing for some transferability of learning between settings, moving away from reliance on the highly detailed 'thick descriptions' of Geertz (1994). This language of CMO configurations is also compatible with a complexity view of systems (Best et al., 2012).

Whilst Appendix B notes some of the challenges associated with clearly defining CMO configurations, this research has adopted the realist view and uses the concept of context dependent mechanisms where possible as a helpful frame for describing research findings.

5.2 Conceptual frameworks

Research design is influenced by the underpinning research paradigm (i.e. pragmatism and realism), the context of the research and researcher preferences (Chapter 2), objectives and research questions (Chapter 3), methodology (i.e. AR utilising mixed methods as described in Section 4.2) and the conceptual frameworks used in the research.

This section deals with conceptual frameworks. Maxwell (2012 p. 39) describes these as "the system of concepts, assumptions, expectations, beliefs and theories that supports and informs your research". This research has been underpinned by two conceptual frameworks.

- The ways in which the ACT Academy conceptualises transformational change.

- The relationship between the different types of change and action occurring during the enquiry processes undertaken.

5.2.1 Conceptualising transformational change

As noted in Section 4.1, the ACT Academy has had to create its own perspective on transformational change that draws upon multiple academic sources and the experience of the faculty. This provides a conceptual framework that underpins everything within the TCSL programmes.

This framework is represented by the image shown in Figure 13 (NHS Improvement, 2017). This is used as a pedagogical tool within programmes to explain our position on transformation.

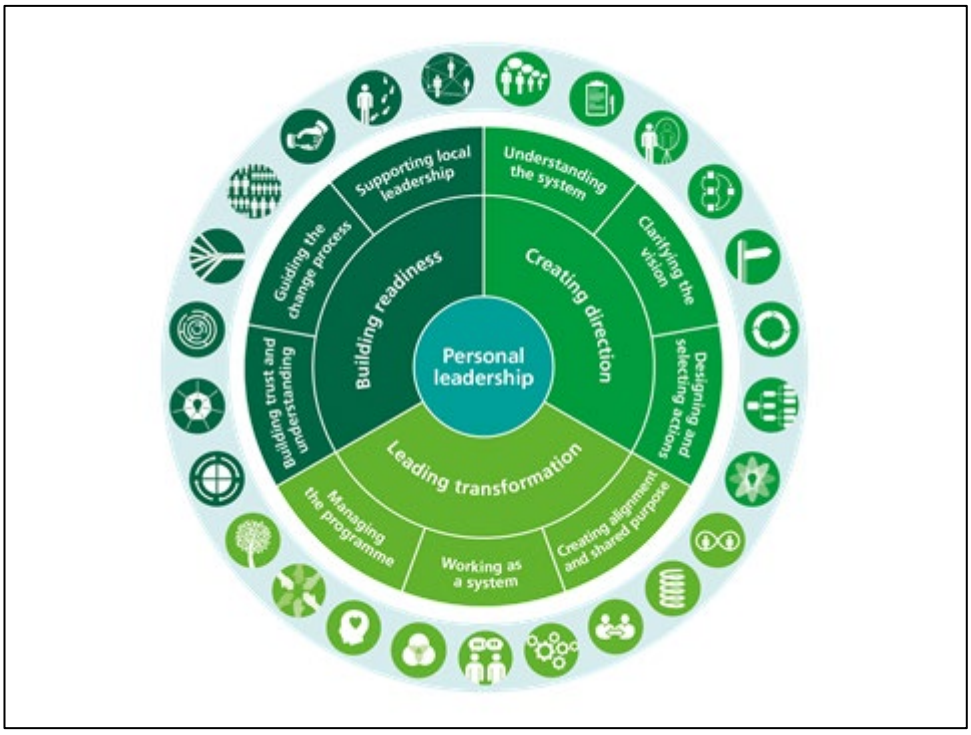


Figure 13: The nine factors framework and knowledge domain icons

The image contains two main elements. The first is the outer ring of icons which represent the knowledge domains (summarised in Appendix A). Each of these is itself a conceptual framework collated around a central theme, typically representing a perspective from the academic literature. The selection of domains and their content have evolved over time through multiple mechanisms as faculty knowledge has developed. This has included

- tacitly, as the faculty have collectively shared and explored new concepts or ways to construct TCSL programmes;

- formally, through publications or the documenting of faculty perspectives (e.g. NHS Improving Quality, 2015); and

- experientially, through the adaptation or creation of modules and their use in TCSL programmes.

The second element in Figure 13 is the inner part which is known as the 'nine factors framework'. This has three differently shaded green areas, each of which is further divided into three. The resulting nine factors represent the major types of action viewed by the ACT Academy as necessary in transformational change. So, whilst the knowledge domains represent multiple theory perspectives, the nine factors provide a description of how they should be interpreted as action within the systems undergoing change.

The three groupings of the nine factors are as follows.

- 'Creating direction' contains actions relating to understanding the need for transformational change, creating a vision and deciding upon (and acting upon) plans to deliver it.

- 'Building readiness' is concerned with the system that is delivering the change by taking actions to ensure the individuals, change team and wider system are ready to change.

- 'Leading transformation' is about establishing new ways to lead change, both personally and through others, as well as shaping the way the change is guided.

More detailed information about each of the nine factors is provided in Section 12.1 which describes a process used to review and revise the framework as part of this research.

Together the knowledge domains and the nine factors framework provide a foundational starting point for how transformation is viewed in this research.

5.2.2 Change and action within this research

Pawson and Tilley (2004 p.3) state that "programmes are theories incarnate". This means that any organised set of actions contains theories (often implicit) about how to reach a desired endpoint.

When participants attend TCSL programmes, the nine factors framework and the detailed content of the modules they experience are offered as a conceptual basis for their change

actions (i.e. a theory of action). What participants actually choose to do will be a combination of this offered theory, their interpretations of it and how they integrate it with their own change management practices. Similarly, each TCSL programmes as a whole is a 'theory incarnate'. This theory is about what content needs to be taught and how to teach it so as to educate participants and encourage them to use the TCSL content in their change work.

Figure 14 shows a conceptual framework (using the style of a realist diagram introduced in Appendix B) for how these different 'programmes' and 'theories' are related.

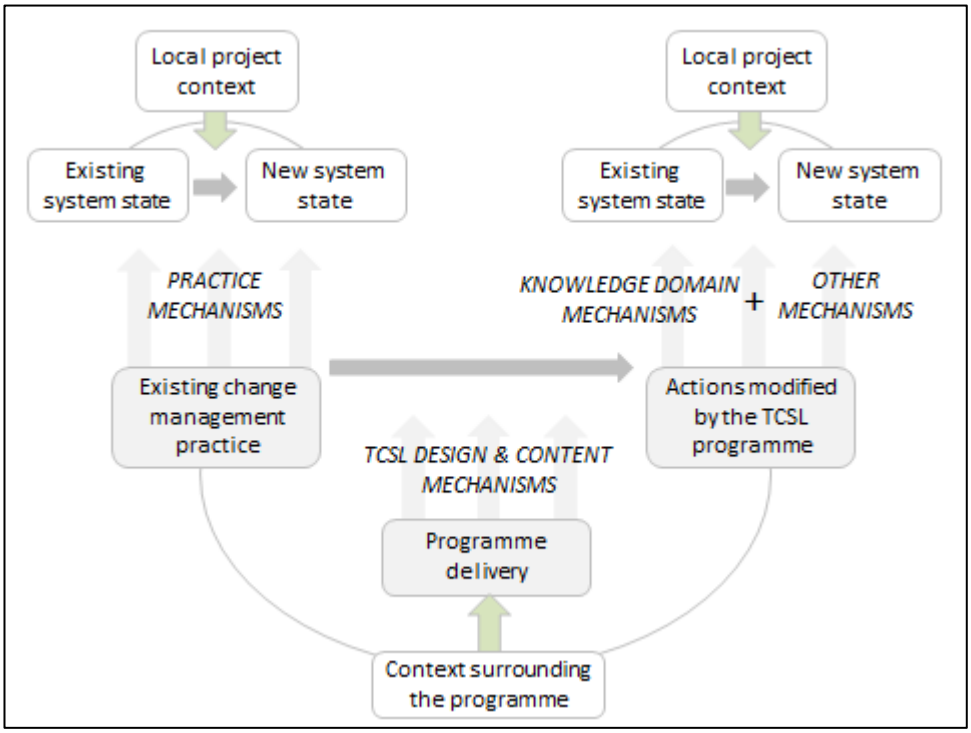


Figure 14: A realist conceptual framework for the research

Three sets of actions are shown in the grey boxes.

In the upper left part of Figure 14 is the situation in systems attempting change without the benefit of a TCSL programme. People are trying to move their system from one state to another by designing actions using their existing change management practices. In realist terms these practices represent various mechanisms that are influenced by aspects of their local context. This situation also represents the state of TCSL participants before they attend the programme.

In the upper right of the figure is a similar scenario but now for those who are attending a TCSL programme. Here, participant change management practices should reflect at least some of the mechanisms represented by the TCSL content. There may also be other

mechanisms linked to the ways in which participants adapt the TCSL content or apply their own personal change management practices alongside this content. All of these mechanisms are again influenced by aspects of the local context.

Moving down the figure, the shift in participant behaviour to undertake actions based upon the TCSL programme (denoted by the horizontal grey arrow) occurs through attendance at a TCSL programme. The degree to which behaviours are changed depends on the details of the programme and the context surrounding it. Two sets of mechanisms operate to create behaviour change. One set relates to the way TCSL is designed to support learning and application. The other set relates to the detail of the content offered and its perceived relevance to transformational change practice. Appendix B describes some hypothesised mechanisms and contexts related to TCSL programme design identified from faculty conversations (both prior to and during this research).

As a whole, Figure 14 represents the complicated landscape encountered during this research. To understand it better it is helpful to consider scenarios that might lead to TCSL participants not using TCSL content in their change work.

- At the top right of the figure, the local project context may not match the assumptions of the TCSL programme. For example, this might occur where change need only be incremental in nature (i.e. non-transformational) or the system has its own approaches to change that are mandatory.

- It could also occur where TCSL content does not represent a complete response to the issues participants face in their local change context (i.e. TCSL content is inadequate).

- At the programme level lower in the figure, the existing participant knowledge of change practices and their system also provides a basis for judging the value of TCSL content. If content is conceptually weak then it will not be adopted.

- Similarly, if content is taught in an inappropriate way then it will also not become part of the participants' change practices (e.g. if explanations are unclear).

- Furthermore, the context surrounding a TCSL programme could also influence adoption. For example, if a participant views the TCSL programme as time off from work then it is unlikely that they will invest much cognitive effort into assessing or adopting new practices.

As these scenarios show, the translation of the TCSL programmes into action is a complicated mixture of project and TCSL programme contexts, participant assessments of the value of content and a consequence of faculty decisions about how to support the learning and application of content.

Figure 14 can therefore be modified as Figure 15 to identify some areas of enquiry relevant to this research.

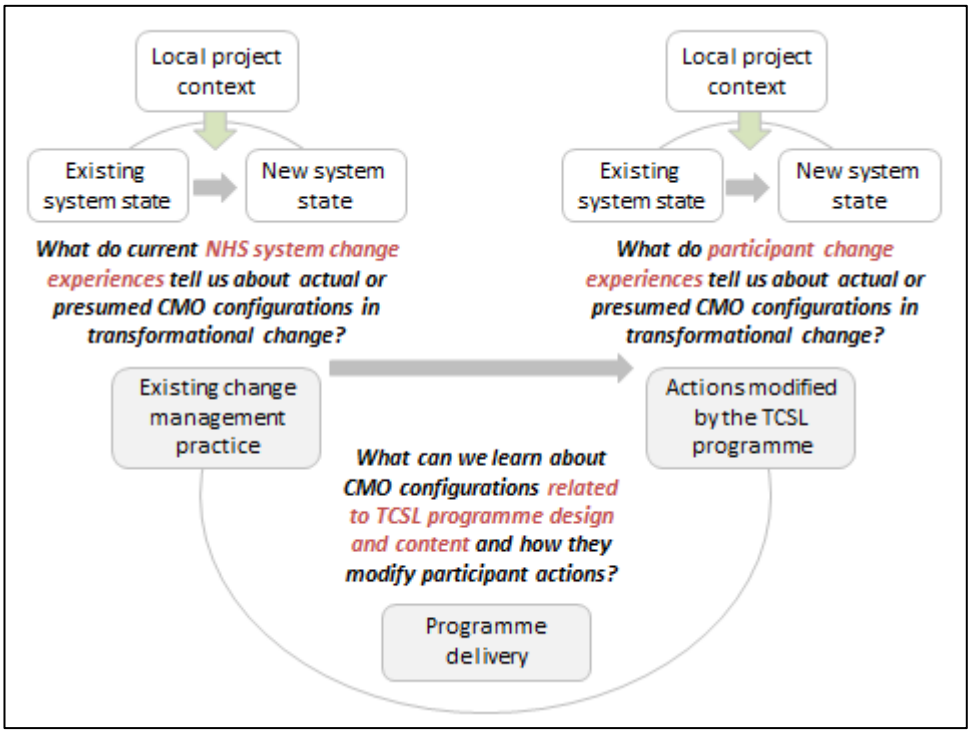


Figure 15: A realist conceptual framework showing areas of enquiry in the research

As can be seen, the questions in Figure 15 are consistent with those identified in the research objectives in Chapter 3 (and with the learning process described earlier in relation to Figure 5).

Figure 15 also illustrates how learning can be gained from different audiences. For example

- Existing NHS change agents can reflect on their practice to describe the CMO configurations they experience in their transformational change activities. This could suggest adaptations to the knowledge domains.

- TCSL participants can similarly reflect on their practice to describe how the CMO configurations represented by TCSL content are operating in their activities and are being modified or added to by them. This reflection can occur either during the workshop application of content or when it is applied outside of the workshops.

- TCSL participants can also provide learning about the CMO configurations related to the TCSL programme design and how their practice is being influenced in the workshops.

- Faculty can provide perspectives on all of these CMO configurations, drawing upon their experience as change leaders, their interpretation of the role of the knowledge domains, their reflections on decisions regarding TCSL programme designs and their on-going exploration of relevant theoretical perspectives.

Figure 15 can also help to illustrate the scope of this research and some of the practical limitations to enquiries. In the figure the upper right element is about application of TCSL content to system change. In this research it was not possible to directly explore change occurring within systems so as to observe how TCSL content was being applied or its impact. This was due to a number of reasons.

- Transformational change typically occurs through multiple activities involving multiple people across large geographies (e.g. the scale dimensions of Figure 7). Gaining a meaningful understanding of change processes and contextual influences would therefore require a significant investment of research capacity.

- Gaining the access required to systems to explore change practice would be challenging. Attempts to engage TCSL participants in case study creation indicated a reluctance to devote time to such research as many already felt they had inadequate personal capacity for their change activities.

- Transformational change can occur over long time periods and thus the eventual impact of actions may only be known many month or even years after their enactment.

For these reasons a pragmatic choice was made to mainly limit this research to participant application of TCSL content to their projects within TCSL workshop settings. In a typical TCSL programme design approximately 50% of workshop time is dedicated to such application and thus participants have a significant amount of time to apply content from each module.

Exploring the top right of Figure 15 through participant activities within workshops clearly creates some research limitations.

- Participants are not acting directly within their systems and thus the workshop setting provides an additional layer of context.
- The application of content occurs (in team programmes) only with colleagues who have also been exposed to TCSL content.
- Within a single workshop participants do not experience any long term impact of the decisions that they have made based on the TCSL content (i.e. they are predominantly planning actions or making new sense of past actions).

However, the choice to focus on participant workshop experiences was also perceived as having benefits. The structure of workshop activities meant that content would be applied by participants in the way intended in module designs (i.e. limiting other contextual influences or distractions) and in ways that supported reflection on the content (e.g. through plenary discussions). Also, the short period between learning TCSL content, its workshop application and feedback on its relevance prevented any issues with recall.

5.3 Research threads

Robson (2011 p.45) suggests that real world research will typically follow a flexible design which develops "though interaction with whatever you are studying and has data collection and analysis intertwined". This follows because real world research occurs in an uncontrolled context where plans, stakeholders and priorities are all open to change.

Research design is therefore more readily described as a series of interwoven threads that come together throughout the research to provide coherence. In this research the threads are shown pictorially in Figure 16 building upon the conceptual framework shown in Figure 15 and the research objectives of Chapter 3.

The threads represent

- testing module content and programme designs through participant feedback;
- understanding participant experiences of delivering transformational change and feeding this into the knowledge domains and programme design;
- challenging existing knowledge domains by drawing upon the experiences of experts in transformation;

- identifying (or creating) new theoretical perspectives to apply to the knowledge domains;
- building, challenging and exploring the professional practice of the faculty in order to shape the knowledge domains and programme designs; and
- learning from faculty experiences in delivering and observing TCSL programmes.

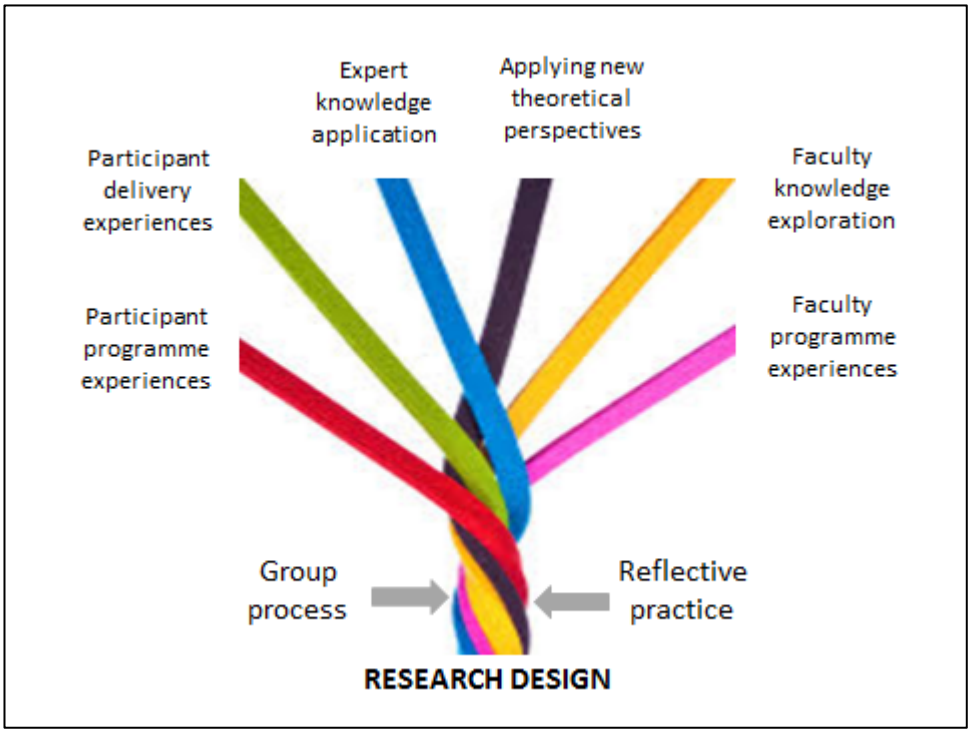


Figure 16: The threads of the research design

Here the threads are held together through researcher reflective practice (embedded in the AR process of Figure 12) and the researcher (as practitioner) management of group processes.

It should also be noted that in the original research proposal (Singfield, 2016a) it was hoped to include learning about participant experiences through actively supporting them in situ (i.e. going beyond some of the workshop limitations identified in the previous section). This bespoke work would have seen faculty working with participants in their systems to apply programme content to their real-world challenges. Unfortunately capacity limitations within the ACT Academy meant that such opportunities could not be pursued but they remain open as a possible avenue for future research to support the further development of TCSL programmes.

6 Methodology in action

6.1 Research methods and analytical approaches

The threads of Figure 16 are created through research methods and methodologically informed practices. This section discusses both and describes the analytical processes used.

The main methods and practices in this research fall into four categories, each of which is discussed separately here and expanded upon in later descriptions of the AR cycles or other enquiries.

- Use of a research journal as an aid to reflexive practice and as a source of research data.
- Interviews with faculty, participants and experts in transformational change.
- Design and facilitation of faculty group discussions.
- Use of participant workshop evaluation questionnaires.

Ethical dimensions of the research and the role of the insider researcher are described separately in Section 6.2.

6.1.1 Research journal

A research journal was used throughout this research to document activities and record reflections. As suggested by McNiff (2016) it was also used to capture critical incidents as contemporary accounts.

The use of a research journal as an aid to the validity of other research methods is supported in the literature. Tufford and Newman (2012 p.86) note that “Perhaps paradoxically, memoing one’s hunches and presuppositions, rather than attempting to stifle them in the name of objectivity or immersion, may free the researcher to engage more extensively with the raw data”. The journal thus became a place to explore my thoughts, impressions and plans whilst capturing data relevant to the research. Fox, Martin and Green (2007, p.148), note that a research journal can be periodically reviewed “in order to re-contextualise decisions made about the study”. It therefore also became a reflexive device to retrospectively challenge the premises underpinning activities.

A research journal can be used as a source of data in its own right. McNiff (2016 p. 53) argues that its validity as a source of evidence "may be tested against the critical feedback of yourself as a researcher". Later chapters provide examples of how the chronological, contextual and reflective account of events provided by the journal was used to identify and explore learning from the enquiries undertaken in this research.

Traditionally research journals are a private way of capturing the personal narrative of an unfolding situation, exploring the "reflexive relationship between the research and the researcher" (Fox, Martin and Green, 2007, p.149). They are therefore a personal rather than public story, sense-making in the inner rather than outer world. In this research I wanted to bridge this gap to support my colleagues in becoming more aware of the faculty's collective knowledge and assumptions. To do this I used my main mode of communication (emails) as a journal-like tool. As far as possible I used my emails to authentically represent my understanding of situations and decisions, offering them as statements to be accepted or challenged by others. In this way the emails embodied Habermas's ideal speech situation (1987) in their commitment to creating understanding, being appropriate to the audience, demonstrating sincerity and in seeking to represent the truth. So for me and (by intent) others, the emails became a shared narrative of the AR journey also captured in the research journal.

As a location for my thoughts and learning, the journal also provided a place to capture and test my emerging understanding of transformational change and complexity. In my quest to enhance the faculty's knowledge in these areas I frequently shared key messages and thoughts about relevant literature, capturing these and faculty responses in the journal. In writing this thesis my reflexive review of these entries has helped me to make further sense of these topics which has emerged as the extensive account provided as Appendix C.

6.1.2 Interviews

Four sets of interviews were undertaken in this research and are summarised in Appendix D which includes brief information on the research procedures applied. Chapter 8 and Cycle 5 provide detailed descriptions of these enquiry processes and their findings.

Kvale (1996, cited in Legard, Keegan and Ward 2003) offers two helpful metaphors for the interview process. The first is the interviewer as (the positivist) miner, unearthing knowledge. The miner's role is to search effectively and extract without damage or contamination. The second is the interviewer as (constructivist) traveller. Interviewer and

interviewee go on a co-constructed journey, each leading at times and each contributing to how the sights are described. Here, adopting the pragmatist perspective, the approach to interviews has moved flexibly between these two metaphors dependent upon purpose.

Braun and Clarke (2006) suggest that thematic analysis is suited to both of these metaphorical positions. They further suggest that it is appropriate both for inductive approaches (where themes arise from the data) and deductive approaches (where an existing coding frame is used to explore the data). Again, both of these approaches have been used in this research, the latter also on occasion drawing upon the template analysis method (King, 2004b).

Figure 17 summarises the iterative thematic analysis process described by Braun and Clarke (2006). Red arrows are shown to indicate motion forward and backwards between the data set, coded extractions and the analysis.

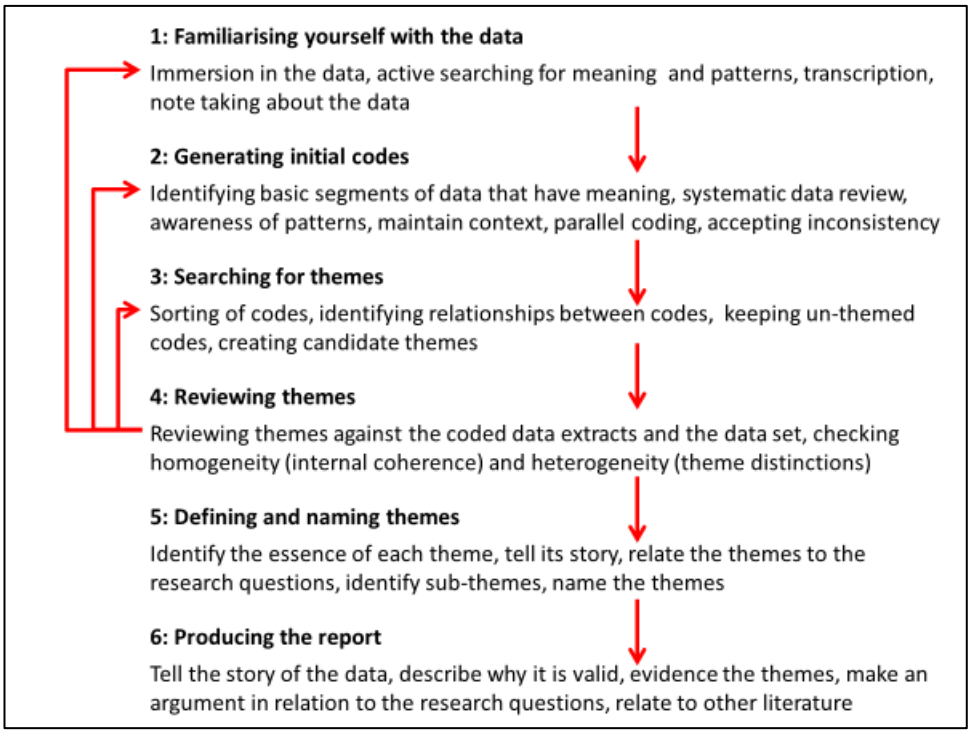


Figure 17: A thematic analysis process

This reflects the process used in this research where interviews were analysed thematically. The process was also adapted at one point in this research to include an additional early step that related to the creation of what became termed 'micro-stories'. The way these short accounts of practice were used in the thematic analysis is described in Section 8.3.

All the interviews undertaken in this research have shared some common features.

- Interviewees were informed of the purpose of the interviews and how the data would be used (i.e. to support of TCSL related changes and this research).
- Consent was agreed and confidentiality procedures were put in place.
- Interviews followed semi-structured open question designs (as described by Robson, 2011).
- They were telephone based and recorded with participant permission.
- Researcher reflexivity was used as a method of bracketing preconceptions (King, 2004a; Tufford and Newman, 2012).

Additional actions have been taken where appropriate to ensure the quality of the interview and analysis processes. These are described in detail in later sections of this report and have included

- providing interviewees with outline interview schedules in advance of interviews as an aid to their preparation;
- co-analysis with other faculty members (or making source data available for review);
- triangulating across interviews;
- using interviewee verbatim statements in describing interview findings; and
- undertaking member checking procedures (i.e. feeding back analysis to interviewees).

6.1.3 Group discussions

Group processes have been used throughout this research to support collaborative enquiry and action planning and have thus been integral to the AR cycles. Their design, while not adhering to the format of focus groups due to their work context, drew upon the principles employed in this method. For example, attentiveness to structure and scene setting, the use of probing questions, the encouragement of inter-group inquiry or synergy and processes for feeding back outcomes to participants to support validity (Finch and Lewis 2003; Teddlie and Tashakkori, 2009).

A key difference from the traditional focus group approach has been my positioning. Here I was not an objective, neutral convenor removed from the debate, but instead an active

participant. Steyaert and Bouwen (2004) suggest that such a positioning does not preclude using such discussions as a source of learning.

Group processes have also been a source of research data, providing reflective insight into the AR cycles. Unfortunately, due to the workplace setting, audio recordings of discussions were not possible. Data gathering was therefore limited to capturing my personal contemporary accounts and reflections in my research journal (sometimes with summaries also produced as emails as discussed earlier).

Some group discussions used in this research utilised an after action review process (Bliss, Minnis, Wilkinson, Mastaglio and Barnett, 2011), particularly where discussions had a specific event focus such as the delivery of a TCSL workshop. This provided a structured group learning process focused on identifying actions based on reflections about the programme delivery.

Personal reflection on group interactions also sometimes drew upon the critical incident technique described by Schluter, Seaton and Chaboyer (2008). In this, specific events and decisions are considered in detail in order to draw out wider inferences and learning about group processes. However, the research did not seek to capture the individual thought processes, feelings and frames of reference used by those involved as suggested by Chell (2004) as integral to this method. Instead it was undertaken as a personal reflective process occurring immediately after important group discussions.

6.1.4 Quantitative and qualitative questionnaires

Questionnaires have been used throughout this research. Their most frequent use has been to gather data from participants at each TCSL workshop. These have provided summative accounts of programme and content value as well as formative data used to guide further programme design. Across all the programmes described in Chapters 9 to 11 over a thousand completed surveys were reviewed.

Questionnaires use pre-defined questions (open or closed) to illicit responses from a sample of a population. In a written or electronic form they can be cost-efficient (allowing views from a large group to be easily captured), designed to support relatively simple analysis and preserve participant anonymity (Debois, 2016).

In this research the majority of questionnaire data from workshops was collected at the module level with separate questionnaires produced for each workshop day. An example of the questions relating to a specific module is shown in Figure 18.

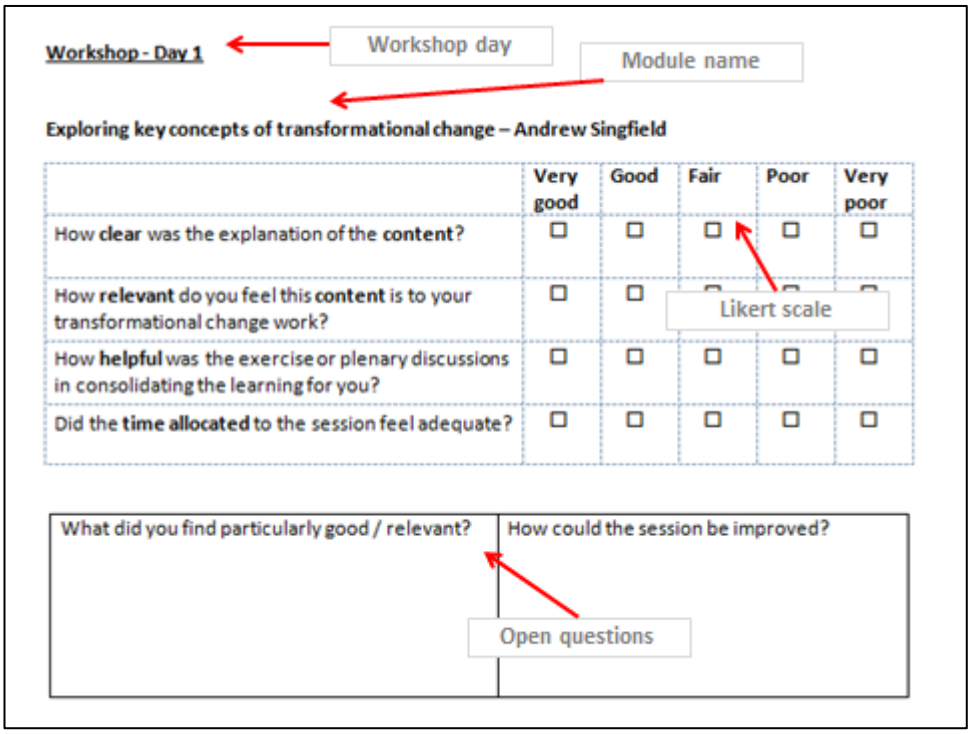


Figure 18: Example of a module level extract from a workshop evaluation questionnaire

As can be seen in Figure 18, a typical questionnaire provided a series of questions linked to rating scores measured on a Likert scale (1932, cited in Robson 2011). The response categorisations and presentation of a Likert scale aim to infer a logical, balanced and incremental scale. This then allows categorisations to be represented as numerical interval data that can be manipulated arithmetically (Robson, 2011). For example, in Figure 18 the five categories were assumed to represent (from left to right) scores of 5 to 1 respectively.

The rating scale questions used in all workshop questionnaires were developed with faculty members. As the questions could not be pre-tested with participants, faculty also undertook a review role to test reliability and assess validity (e.g. applying the quality checks suggested by Hussey and Hussey, 1997).

At a module level the rating questions represented faculty hypotheses about the factors that might influence participant learning or their use of the module content. As each TCSL workshop day would typically include 5-8 modules the number of rating questions for each module was limited in order to encourage completion. This inevitably meant that questions conflated multiple mechanisms and contextual factors. Qualitative open questions were

therefore used at the module level to understand these responses whilst also helping to highlight key aspects of modules or gaps in content.

In the programme related AR cycles described later, Figure 18 provides a good illustration of how the enquiry explored earlier in Figure 15 came to be represented as questions. For example

- Relevance of content was the main measure of whether a module's content was useful as an aid to transformational change practice. Participant views on relevance therefore served to validate a module's inclusion in TCSL programmes.

- Clarity of explanation probed a contextual factor influencing learning (e.g. content might be deemed irrelevant if not taught well).

- The helpfulness of the exercises and time allocated to them allowed some assessment of whether workshop processes supported application of content (as inadequacies in either could also impact upon relevance).

Each TCSL programme during the research period used questionnaires with the module specific format described above although the rating scales and exact questions evolved throughout (as will be described later). In addition, each questionnaire contained a small number of day-specific or programme-specific questions either as ratings or open questions. In Section 13.4 some of the constraints impacting upon the design and use of these questionnaires are discussed.

Sivo, Saunders, Chang and Jiang (2006) discuss the issue of low questionnaire response rates and the implications for nonresponse bias. They suggest that researchers follow the guidance of Dillman to encourage questionnaire completion. This focuses on trust building and consideration of the costs and benefits to respondents in participating in questionnaire based research (Dillman 1999, cited in Sivo et al., 2006). Here following Dillman's advice a number of steps were taken to encourage questionnaire completion. For example, questionnaires were explicitly linked to a desire to improve TCSL programmes for future participants. This was intended to reflect a group value (i.e. supporting peers) and frame the questionnaires as advice seeking (both categories advocated by Dillman). Similarly, the costs of participation were minimised through the use of simple questions and rating scales, with time allocated in workshops for questionnaire completion. Trust was enhanced through the

building of the participant and faculty relationship during workshops and by stressing how previous feedback had been used to influence programme designs.

Robson (2011) and Cohen (1990) suggest that for much real world research it is possible (and desirable) to use relatively simple quantitative analytical approaches. Here, the faculty determined that the most helpful summary measure for module level rating questions was the mean value for each measure across participant responses (e.g. the mean on the 1-5 Likert scale). This provided a high level view of each module that allowed a basic cross-module comparison. Faculty also routinely reviewed individual participant ratings and comments as a way to further understand the summary ratings.

Statistical analysis of module ratings was also used to identify where any module differed significantly from others in a workshop. The highly skewed nature of responses (i.e. towards 'very good'), meant that the data was unsuitable in its categorised form for statistical tests requiring a normal distribution (e.g. see Clegg 1990 for the rules on statistical tests). Statistical analysis therefore relied on amalgamating data into two categories of 'very good' and 'other' (e.g. in Figure 18 four of the five categories would be combined as 'other'). Using the proportion of 'very good' ratings as the main measure, a 95% confidence interval could be calculated (following the approach described in Gardner and Altman, 1989).

The lower part of Figure 19 shows an example where the proportions of 'very good' ratings for 34 modules (delivered in the same programme) are plotted together with their confidence intervals. The mean proportion of 'very good' achieved across all 34 modules combined is also shown (i.e. 39% of all ratings were 'very good'). Modules with confidence intervals that do not cross this mean line are identified as statistically significant when compared to the mean proportion and are highlighted with red or green circles. A portion of the chart is expanded in the top left of the graphic showing an example of a module with a proportion of very good ratings significantly above the group mean.

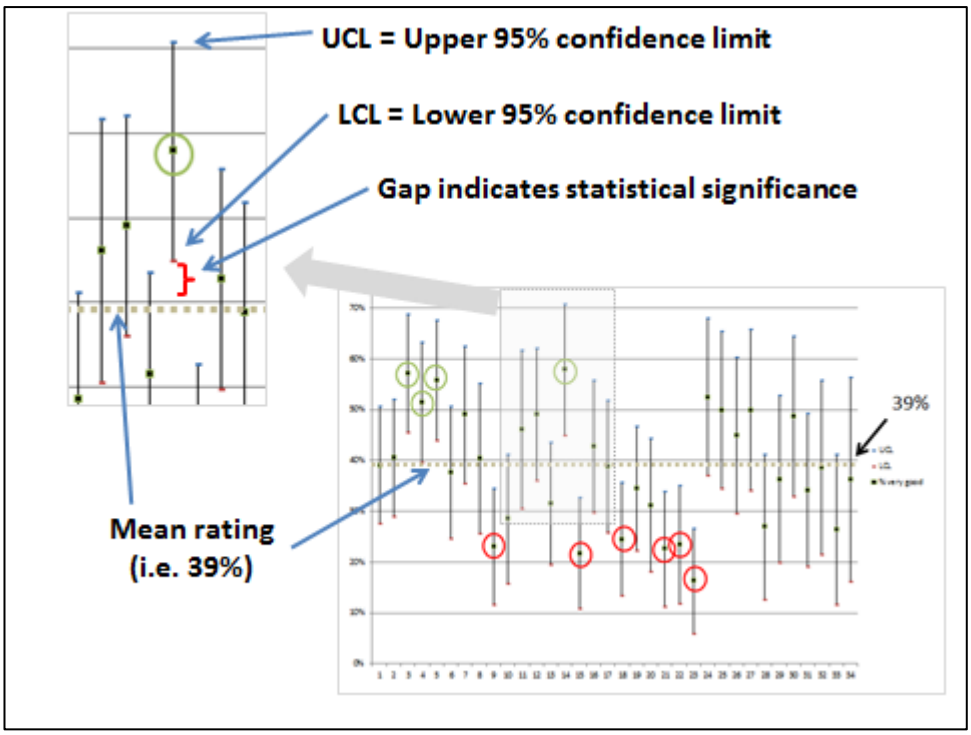


Figure 19: Example of a confidence interval analysis of rating scores

For the qualitative questionnaire data, individual faculty members were encouraged to independently review all responses in readiness for group discussions. This supported individual detailed interpretation of the findings and allowed them to contextualise individual rating scores. This was also a pragmatic response to the difficulty of undertaking detailed qualitative analysis in the period between workshops and group discussions (the later typically occurring within a week of workshop delivery). For some programmes a basic summary analysis was provided to faculty members that had been produced by a non-faculty member of the ACT Academy. However, this did not constitute a full thematic analysis. Chapters 9 to 11 also describe some instances where, as part of this research, a more rigorous analytical process was applied. This either followed the thematic analysis approach described in Braun and Clarke (2006) or content analysis methods as described by Hsieh and Shannon (2005) dependent upon the requirements.

Processes for administering and analysing the workshop questionnaires were similar for each TCSL programme.

- Questionnaires were designed to be anonymous.
- They were distributed to all participants at the start of each workshop day and a box was provided near to the exit to collect all questionnaires at the end of the day.

- Participants were encouraged to complete questionnaire elements after each module and given frequent reminders.

- After the workshop, members of the ACT Academy not involved in programme delivery would transcribe ratings and open question responses into a Microsoft Excel spread sheet. Where requested, they would also produce the initial quantitative summary data and (where possible) a basic qualitative summary.

- Faculty members were then sent a copy of the entire spread sheet and summaries in advance of discussions so that they could review both.

During the research period the ACT Academy Research and Evaluation team took on an increasingly important role in gathering learning from the TCSL programmes. For programmes towards the end of the research period a member of this team attended workshops and undertook short interviews with a small number of participants to capture their workshop experience. Key points (based on the judgement of the interviewer) were fed back to faculty to be considered alongside the cohort's questionnaire data. Data collection and faculty interpretation therefore became increasingly rich and detailed as the research progressed.

6.2 Ethics and insider action research

6.2.1 Ethical approval

Research within the NHS is overseen by the National Institute for Health Research (NIHR). The NIHR have adopted the Research Governance Framework for Health and Social Care (Department for Health and Social Care, 2009). This describes the principles of good research practice including the role of Research Ethics Committees (RECs). According to Health Research Authority (2017) guidance this research did not require REC approval. In addition, NHS Improvement (the host organisation for the research) did not require a separate ethical approval process. Ethical approval was therefore provided by Middlesex University based upon a review of the research proposal (Singfield, 2016a).

6.2.2 Ethical practice in action research

The ethical principles underpinning research are well document in the literature (see for example Fox, Martin and Green, 2007; Silverman, 2017). These are centred upon

- ensuring the physical and psychological well-being of research participants is not adversely affected by the research;
- treating participants with respect and dignity;
- voluntary participation, based upon freely given informed consent, with the right to withdraw; and
- anonymity for participants with their privacy and confidentiality maintained.

In the elements of this research dealing with programme participants or external experts these principles were adopted explicitly through consent procedures and agreeing anonymity measures.

However in AR the evolutionary nature of the research process, the role duality inherent in insider based research, its action orientation and the blurring of the distinction between researcher and participant bring new ethical challenges. For example

- Khanlou and Peter (2005) and Silverman (2017) note that the concept of informed consent becomes problematic. As co-researchers, can faculty members 'inform' themselves? Can they give consent to a process that by its nature evolves in unpredictable ways?
- Holian and Coghlan (2013) and Fraser (1997) draw attention to the difficulties associated with withdrawal. How can a faculty member 'withdraw' when the research is intrinsic to work based action? What does withdrawal mean for how data derived from them is used? For example, data cannot be 'un-known' when informing researcher reflections and action.
- Luttenberg, Meijer and Oolbekkink-Marchand (2017, p.91) discuss the complication of moral judgements. They note "that which is effective and efficient from a technical–instrumental perspective may differ from what is morally right". How then does a researcher adopt a moral position in pursuit of both research data and action?
- Williamson and Prosser (2002) draw attention to the difficulty of maintaining confidentiality in a close collaborative relationship. They also note that AR can have political consequences. How then can confidentiality and anonymity be guaranteed, and how in a political environment can the researcher avoid doing harm?

The fact that these concerns have no simple procedural solutions (e.g. akin to consent forms) perhaps explains why Holian and Coghlan (2013) found that ethical issues in AR had not yet been afforded sufficient attention in the literature. Their solution is to suggest that "insider action researchers need to attend to the experiences that provoke ethical challenges, be intelligent in how they understand what is going on and what is at stake, be reasonable in making judgments and understand and be responsible for the actions they take" (ibid., p. 414).

In this research a number of practical steps have been taken to address both the standard principles of ethical research and the questions noted above. These have included

- Discussing the ethics of AR and this specific research with faculty participants on multiple occasions. This was done to raise awareness of the AR process and to support faculty in raising any ethical concerns. It was also used to maintain on-going consent to the research.

- Agreeing with faculty members the boundaries of confidentiality to be applied in specific research activities (e.g. as part of interview processes). At a wider level this included anonymisation of their views in this thesis.

- Using communication media (e.g. emails and reports) to ensure project and research related discussions and agreements are fairly documented and open to all faculty members to review (as described earlier).

In practice, two ethical concerns arose during this research that had to be handled within the processes outlined above.

- A concern was noted about how credit for work would be attributed in my research. This reflected the faculty's familiarity with traditional research methods where the researcher role is clearly delineated from that of participants. This was addressed through conversations that clarified how AR differed from other forms of research and through reassurances about how the collective work of the faculty would be portrayed here.

- A colleague suggested that it was necessary for me to be explicit in meetings when I was "taking notes for your doctorate". Underlying this suggestion was a concern that my note-taking was some form of covert observation that did not have a place in a work setting. This was also discussed with colleagues. In particular, we explored how

note taking is not unique to research and is also used in normal work practices to capture factual and reflective accounts of meetings. In this context my note taking was accepted as an extension of normal work practices.

6.2.3 Insider action research

'Insider action research' occurs when the researcher, as an interventionist, is part of the system undergoing change (Coghlan, 2007).

The insider position has some significant advantages when compared to externally led research. Not only does the researcher bring detailed contextual knowledge of the work of the organisation they "will know the shadow side in a way that an external person cannot" (Fox, Martin and Green, 2007, p.60).

However, Holian and Coghlan (2013, p.412) suggest that there are also disadvantages. They note that "Insider action research can be seen as subversive and radical, advocating unnecessary change, a form of internal whistleblowing, discussing the undiscussable…, opening a can of worms, pointing out the elephant in the room or saying that the emperor has no clothes". Robson (2011, p.225) also describes it as "inevitably political" as judgements are made about the research process and what to do with its findings. Coghlan (1997) raises similar issues and offers two further challenges. He suggests that researcher pre-understanding can create an assumption that they know more than they do. This can close off attention to disconfirming data and shape how problems are framed. He further suggests that role duality can lead to conflicts of loyalty, behavioural expectations or identification dilemmas.

These issues were to a degree present throughout this research and like the ethical challenges noted earlier had no simple solution. Dealing with the 'undiscussable' or political was aided by my knowledge of the people involved and awareness of the shadow processes or reactions that might be evoked by the research. Where possible, the inclusion of others in research processes became a tactic to lessen my researcher isolation and challenge any potential for my own research myopia. This was also aided by reflective practice and the use of a research journal (as described in Section 2.2), allowing me to consider how my biases could be influencing the research.

For me, perhaps the biggest challenge of being an insider action researcher was the added cognitive and behavioural load associated with maintaining both roles. This was particularly the case in the interpretative and discursive elements of AR that supported how faculty

evaluated programmes and co-constructed new cycles. As a researcher and a facilitator of such activities I needed to be able to do what Schön (1983) describes as 'reflection in action' where I had to bring my personal awareness of what is happening into the process. But in this action I was not just an internal facilitator with knowledge of local context who could focus on the needs of others. I was also an actor involved and invested in the decision making, developing and defending my own views as I interacted with others. In adopting too much of the researcher perspective I risked losing my own participant voice, yet in adopting my faculty perspective I risked getting caught up in the intensity of debate and limiting my ability to support collective sense-making and action.

In practice this challenge was addressed by attempting to draw boundaries between the two roles when both were occurring together. For example, in group interactions I structured meetings in ways that allowed me to move fluidly (and obviously) between presenting data or findings, facilitating discussions and offering my own personal interpretations or suggestions for action. Through the use of reports or presentation media I could signal as I switched roles or verbally differentiate which perspective (researcher or faculty member) I was adopting. I also reflected after interactions to consider how the two roles had interacted and to consider what this meant for the research process.

In looking at the literature on AR it struck me that this personal challenge was perhaps part of a broader paradox at the heart of AR practice for insider researchers. This relates to how deeply AR activities are integrated into normal work routines. To explain this it is helpful to consider two contrasting scenarios that might be labelled as 'backgrounding' and 'foregrounding' of the AR. In the former, AR activities are broadly integrated into work place activities, shifting practices subtly as part of the background and blending into daily work. Learning and action occur in various settings and in various ways not confined to designated 'research' meetings. Here the researcher role becomes an adaptation of the insider role. In the latter scenario, AR processes are treated as separate to everyday work activities and exist in an obvious form in the foreground. Typically a research group might be formed to tackle a specific project and work takes place in defined research meetings. Here the researcher role is separated from the insider role by context.

These two scenarios are idealised but presented here to suggest that for the insider action researcher both have potential advantages and drawbacks that imply neither approach is superior to the other. Figure 20 uses the format of a polarity map (Johnson, 1992) to contrast these two approaches. The upper part shows potential benefits of each whilst the lower part

shows the potential drawbacks if each scenario is pursued exclusively. Such maps illustrate how two opposing approaches can exist as a paradox, where a choice to favour one acts to make its alternative more attractive.

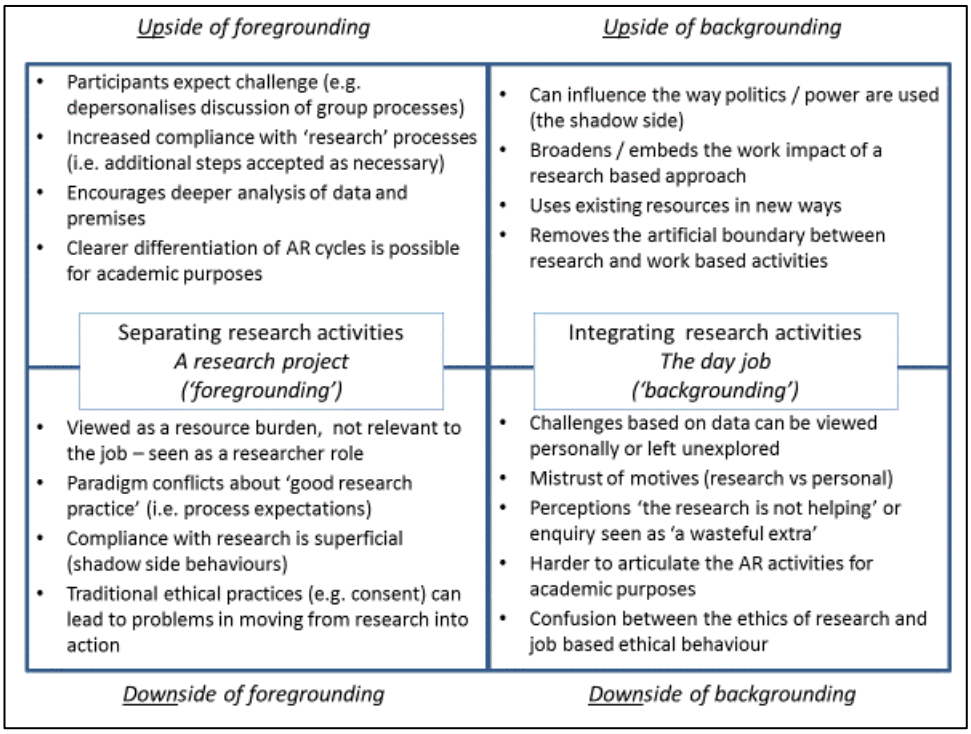


Figure 20: A polarity map of ways to position action research activities

Like all polarities the art of managing them is to maintain the upsides of both poles (Johnson, 1992), on some occasions foregrounding the research and on others backgrounding it, whilst avoiding the downsides of either approach.

In this research the development of TCSL programmes was a core role for the faculty and thus research activities could not be easily bounded through the use of specific meetings or simplistically separating my researcher-self from my faculty-self. The approach I adopted therefore favoured aspects of 'backgrounding', attempting to re-orientate work practices towards the AR approach whilst integrating AR into the work of the faculty. This created the challenges associated with voice noted earlier and may have contributed to the ethical challenges related to my role described in the previous section.

However, I also attempted to gain some of the benefits of the foregrounding approach, both through the signalling of roles described above and more explicitly in some of the enquiry processes undertaken in this research. For example, Chapter 8 describes enquiries that reflect more traditional research approaches where my role was clearly that of the researcher and the activities were bounded as projects separate from standard working

practices. This research orientation allowed me to use the data generated to challenge and inform faculty views as a researcher rather than a colleague. For the faculty interviews (Section 8.1) this research frame also had an emancipatory effect, giving equal voice across the faculty in ways not readily achievable through group discussions.

What research was undertaken?

7 Visualising the research

7.1 The elements of the research

Coghlan and Brannick (2014) use the metaphor of a clock to describe how multiple AR cycles can operate sequentially and concurrently. They suggest the hour hand represents the project as a whole, moving through the stages of AR that were shown earlier as Figure 12. The minute hand represents how individual elements of this project can also move through these stages, contributing to the larger whole. This ordered, systematic process is similar to what Heron (2006) describes as Apollonian enquiry, cycling methodically between action and reflection with each element linking to the next.

This ordered and layered approach to AR is reflected in Chapters 9 to 11. These chapters represent the three major phases of TCSL programme delivery undertaken during this research. Each chapter starts with a brief introduction to the context relevant to the phase and the cycles it contains (similar to the 'pre-step' described by Coghlan and Brannick, 2014). Across the phases these chapters contain a total of five AR cycles, each representing the design, delivery and evaluation of one or more TCSL programmes. Like the hands of the metaphorical clock these cycles are the hours of this research, each containing action and learning.

Figure 21 illustrates how these various components come together as phases and cycles, also indicating the sections where the cycles are described.

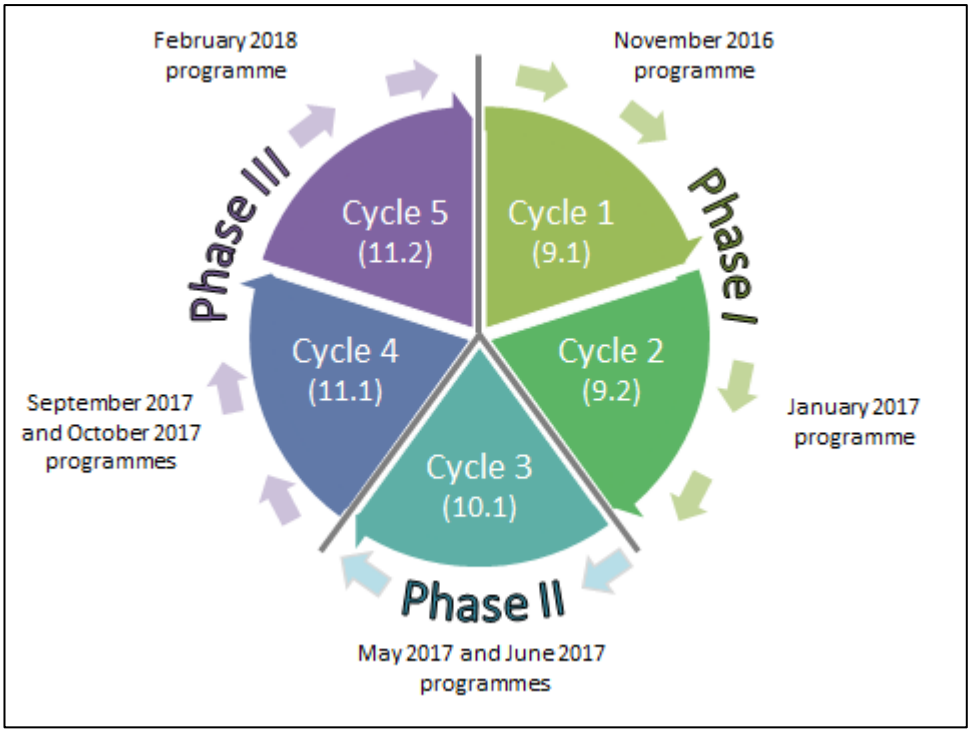


Figure 21: Action research cycles aligned to three phases of programme delivery

In Section 4.2 it was noted how the narrative for each of these cycles is structured around the AR stages shown in Figure 12, using the stage descriptions as section titles in later chapters. As previously suggested, this inevitably leads to some blurring of the stages across the sections in the course of the narrative.

There are also further elements of structure below that shown in Figure 21. If in the figure these cycles are thought of as the 'hours' of this research then some of these can also be said to contain 'minutes' or smaller AR based cycles. Where feasible these are included within the larger 'hour' narratives in later chapters. However, some are extracted for clarity into Chapter 12 and referenced within the other chapters.

As shown in Figure 1, this research as a whole was also supported by three major enquiry processes that used inductive approaches to create new understanding about perspectives on transformational change. These provided a context for many of the cycles noted above either because they occurred early in the research (e.g. faculty interviews) or because they involved an extended period of data generation, analysis and sense-making activities that overlapped with multiple AR cycles (e.g. case studies). They are therefore described first in Chapter 8 to form part of the context for the later descriptions of the AR cycles.

7.2 The phases and programmes within the research period

The phases shown in Figure 21 and the TCSL programmes they contain are described in Table 6. Throughout this report specific programmes are referred to according to their start date (shown in bold in the table).

Phase I: The 2016 / 2017 team programmes	
Start date: *End date:* *Delivery method:* *Teams in cohort:* *Participant numbers:* *Background:*	**November 2016 programme** December 2016 5 workshop days for teams (2-day and 3-day events) plus on-line activities 14 teams 90 participants This programme was created to test the feasibility of offering a new TCSL format based on a blend of workshop and on-line activities.
Start date: *End date:* *Delivery method:* *Teams in cohort:* *Participant numbers:* *Background:*	**January 2017 programme** January 2017 2 workshop days (one event) for teams 7 teams 34 participants This programme offered TCSL materials in a new 2-day format that had not been tried before.
Phase II: The 2017 Insights programmes for individuals and small groups	
Start date: *End date:*	**May 2017 programme** May 2017

Delivery method:	2 workshop days (one event)
Teams in cohort:	N/A
Participant numbers:	54 participants
Background:	This was a pilot of the new short programme called 'Insights'. It was delivered to an internal NHS Improvement audience and was aimed at influencing how they worked to support change in the wider NHS.
Start date:	**June 2017 programme**
End date:	June 2017
Delivery method:	2 workshop days (one event)
Teams in cohort:	N/A
Participant numbers:	66 participants
Background:	This further pilot of the Insights programme was for participants representing 'sustainability and transformation partnerships' (STPs). Participants attended either individually or with 1-2 colleagues and were expected to be involved in one or more transformational change projects.
Phase III: The 2017 / 2018 team programmes	
Start date:	**September 2017 programme**
End date:	January 2018
Delivery method:	6 workshop days (three 2-day events) for teams
Teams in cohort:	11 teams
Participant numbers:	67 participants
Background:	

	This updated programme was for senior teams working on transformational change projects. Project topics were not restricted and could relate to any aspect of NHS services.
Start date:	**October 2017 programme**
End date:	January 2018
Delivery method:	6 workshop days (three 2-day events) for teams
Teams in cohort:	8 teams
Participant numbers:	49 participants
Background:	This programme ran in parallel to the September 2017 programme and followed the same design. Participation was restricted to projects focused upon aspects of urgent and emergency care (UEC).
Start date:	**February 2018 programme**
End date:	May 2018
Delivery method:	6 workshop days (three 2-day events) for teams
Teams in cohort:	11 teams
Participant numbers:	62 participants
Background:	This was a further team programme with no restrictions on project topics.

Table 6: Background to the TCSL programmes undertaken during this research

8 Enquiry into perspectives on transformation

This chapter describes three enquiry processes into different perspectives on transformational change. The involvement of faculty members in these processes meant that the insights derived from them served to influence the AR cycles in later chapters. This current chapter therefore focuses on exploring the rich perspectives offered through these enquiries whilst also describing their impact on the TCSL programmes developed through later cycles.

8.1 Gaining insight into faculty perspectives

8.1.1 Overview

In June 2016, near the start of this research, an enquiry process was initiated with faculty members to create a better shared understanding of each other's positions on a variety of issues. This included views on the existing knowledge domains and their expression as modules, thoughts on our approach to supporting participants through our TCSL programme designs and our emerging understanding of transformational change.

Best et al. (2012, p.428) suggest that the evidence on transformation "is complex and nuanced", "interpreted differently by different stakeholders" with "few, if any, a priori truths". This enquiry process was therefore expected to reveal a variety of diverse perspectives within the faculty that reflected their individual professional practice and their knowledge of the academic literature. Through summarising and synthesising these views it was hoped that this would support collective sense-making and inform future actions both within this research and in relation to our wider work as a faculty. This enquiry therefore acted as a foundation for future action oriented cycles.

The enquiry process occurred in the lead up to an annual ACT Academy planning discussion and thus the learning it generated fed into that discussion. In my researcher role I conducted interviews with all faculty members (four in total) which I subsequently thematically analysed and turned into a comprehensive report (Singfield 2016b). This report then formed the basis of a faculty discussion that I facilitated.

An interview based method was chosen because it offered various benefits over a group discussion alone. For example

- faculty members would have the opportunity to individually express their views without peer pressure;
- individual viewpoints could be explored in a depth that can be lost during group debates where perspectives vie for acceptance;
- it served an emancipatory purpose, circumventing differences in power and status across the faculty; and
- analysis could ensure that underlying themes and connections between faculty viewpoints were accurately identified, captured and brought to the attention of the faculty.

8.1.2 Enquiry details

The interview process was suggested to faculty in June 2016 as an opportunity to individually and collectively reflect on our knowledge and experience in order to shape our work going forward. Over recent years TCSL programmes and modules had evolved without opportunity to take stock or think about the future direction for our work. Using interviews as a precursor to a discussion was suggested to faculty as an emancipatory process that would allow each faculty member's views to be heard and given equal weight. It was further suggested as helping to create a more structured account of potentially diverse perspectives.

In leading an interview process I recognised that my dual role as researcher and insider could create concerns about confidentiality and bias. I therefore suggested that

- participation in the interviews should be voluntary,
- comments would be anonymised (and made non-attributable),
- summaries of personal interviews would be created and shared with each faculty member prior to incorporation into a summary report so that errors of interpretation or omission could be corrected, and
- interviews would be recorded (with permission) to support accuracy of analysis and provide an audit trail if required.

These measures sought to give faculty members some control over their participation in the process and in how their views became represented in any outputs. All four members of the faculty agreed to this process.

To aid reflection in advance of the interviews the faculty were provided with details of the topic areas to be covered in the semi-structured interview. These provided for a broad exploration of their perceptions about the contexts and mechanisms relevant to transformational change and our programmes. They also asked for views on the faculty role and how we might further our understanding of transformational change.

Telephone based interviews took place in August and September 2016, each lasting approximately one hour. Factual summaries were created from my initial review of the interview recordings during the transcription process. These were sent to the relevant faculty member within 2-3 weeks of their interview for checking. Only one faculty member asked for minor changes.

On completion of all interviews a thematic analysis process was undertaken (described in Section 6.1). It drew upon the template analysis approach (King, 2004b) to partially pre-define the coding structure, in this case to reflect the terminology used in the knowledge domains and TCSL programme design process. This acknowledged the terminology as a common frame of reference across the faculty and as a logical structure for subsequent discussions. An example extract of coded interview data is shown in Figure 22. Parallel coding of interview extracts was used to allow some flexibility of interpretation to reflect the context of faculty statements.

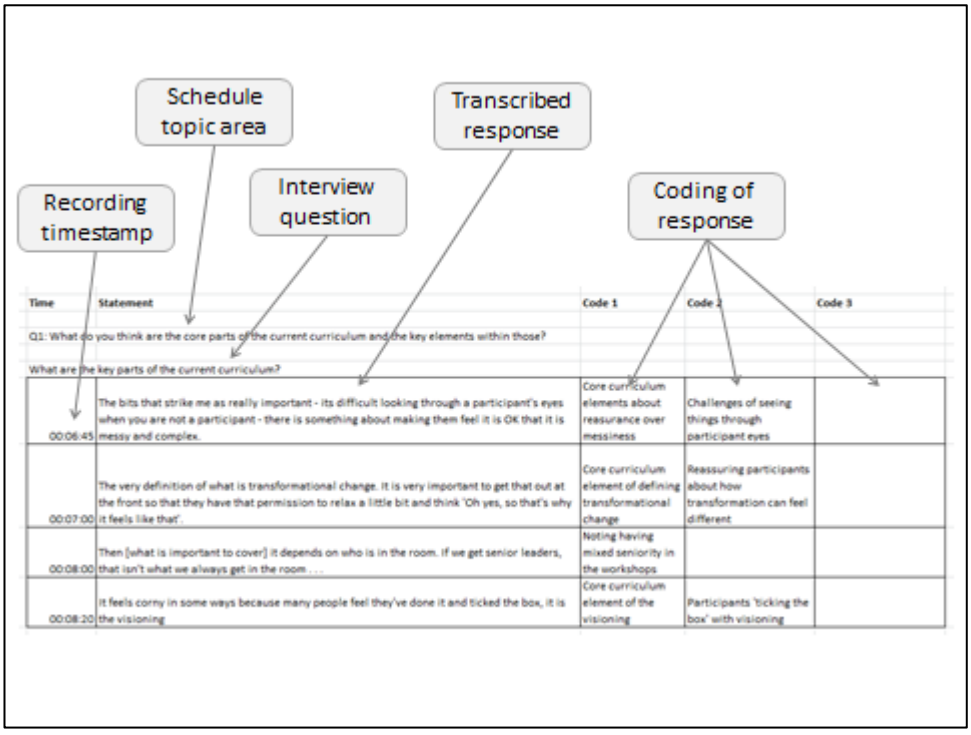


Figure 22: Extract of coded faculty interview data

As part of the reporting process, I reviewed relevant academic literature to offer a theory-based context for some of the themes that emerged. This was intended to provoke wider reflection and in some instances offer an interpretive lens through which to view a theme in a new way.

An extensive report summarising the interview themes was circulated to all faculty members in December 2016 (Singfield 2016b). My views as a faculty member were included but not differentiated from those of other faculty in the anonymised report. This sought to strike a balance between my supportive researcher role and my insider interest as a faculty member.

As well as incorporating relevant literature, other mechanisms were used in the report to engage faculty with its contents. For example, discussion questions were used to prompt reflections and in some areas I expanded upon the themes to include a limited critical analysis as a way of initiating debate.

Table 7 (adapted from the report) shows the 12 main theme areas identified together with their related discussion questions. It should be noted that in the faculty the 'knowledge domains' were commonly referred to as the 'curriculum topics' (see point 2 in Table 7). Also 'QSIR' (point 7) refers to another ACT Academy programme dealing with basic service improvement.

1. Evolution of the curriculum	How do we want to refine, expand or adapt existing curriculum topics?
2. Creating curriculum connections	Can we create more connections between curriculum topics that help to focus leaders on key concepts or activities?
3. Developing our change model	How do we want to present our model of transformational change and the process of change?
4. Refining programme delivery	How should the current delivery model be adapted for our next cohorts and in the longer term?
5. Creating short programmes	What topic areas or themes would we like to develop into stand-alone or linked short offers (e.g. 1-day sessions)?

6. Getting the audience right	How can we get the right audience for our programmes or adapt our programmes to the needs of current or future audiences?
7. Addressing 'complicated' change	What can be done to bridge the gap between TCSL and QSIR to address the needs of those delivering 'complicated' change?
8. Building our knowledge and credibility	How can faculty members refresh and update their knowledge of transformational change to remain credible with participants?
9. Supporting challenged systems	What role will ACT have in supporting challenged systems and what does this mean for our programme design?
10. Aiding reflection and resilience	How can we better support participants to be reflective and resilient?
11. Defining core faculty knowledge	How can we help faculty members to become both specialists and generalists in curriculum topics?
12. Applying adult learning practices	Can more principles of adult learning be incorporated into our programme design and our approach to support?

Table 7: Major themes and associated questions derived from faculty interviews

The report was discussed in January 2017 in a faculty meeting that I facilitated. My researcher role in this meeting was both to convey the report's content and support discussion of what it meant for our action as a faculty. As a faculty member I also offered my views.

Whilst time constraints limited our ability to discuss all elements of the report in detail, there was general acceptance that the themes and questions shown in Table 7 were highly relevant to our work. For example, faculty agreed that we should expand upon the TCSL knowledge domains to provide additional content (item 1), citing 'personal resilience' (item 10) as an example. Limits upon faculty capacity meant that this could not be an immediate priority but it was felt that in the shorter term we could strengthen existing content by creating greater cross referencing of concepts across existing content (item 2).

Overall discussions centred upon two main areas of the report, item 4 (refining programme delivery) and item 8 (building our knowledge and credibility). The former was viewed as the most pressing area for action as we were about to enter a planning process to define our offers for the coming year. The report of the faculty interviews had highlighted a range of learning from previous programmes that suggested we might want to adapt TCSL designs, in particular to allow more time for content and participant discussions. The other point about our own knowledge and credibility was a previously unrecognised issue for faculty. In past conversations we had not explored the need for our own development yet across the interviews this had been revealed to be a concern for most of the faculty. In particular, faculty members feared that in adopting trainer oriented roles they were starting to distance themselves from change practice. This was perceived as weakening their ability to learn through reflection and creating a reliance on knowledge gained solely through the academic literature. Faculty therefore saw a need to connect more directly with participants through providing in situ support or developing coaching relationships.

The main actions resulting from the discussion included the following.

- A decision to elongate our future team TCSL programmes to six days (spread over a four month period) to create capacity for new or altered content with additional time for participant discussions.

- Restricting the cohort size for some programmes so that faculty members could create closer working relationships with teams to support mutual learning.

- Allocating some faculty time to personal development that could be used to build knowledge and maintain credibility as change experts (e.g. through bespoke support to participants or teams).

These actions were subsequently endorsed in the ACT Academy planning meeting later in January 2017.

This enquiry process and discussion also had a more enduring influence on the work of the faculty during the course of this research. It provided an evidence base and shared experience that became the early stimulus and foundation for a range of action and enquiry cycles. These included:

- work on the definition of transformational change (Section 12.3 and Cycle 5) reflecting item 3 in Table 7,

- collective faculty activity to develop new knowledge domains and modules (Cycle 5) reflecting item 1,

- sustained efforts to link together more of the knowledge domain content (Chapters 10 and 11) reflecting item 2, and

- development of a guide to transformational change (Cycle 4) also reflecting item 2.

8.1.3 Reflections

As a process this enquiry was successful in identifying and sharing a breadth and depth of faculty perspectives that provided stimuli for action. The report gave faculty members greater voice and increased awareness of each other's views. It also allowed me to contextualise faculty perspectives in relation to the knowledge domains and the wider academic literature, giving a richer basis for discussions. The measures taken to reassure the faculty about issues of confidentiality and bias also appeared to be successful.

A number of constraints did however limit the impact of this enquiry process.

- The arrangements for confidentiality made it impossible to involve the faculty in data collection or analysis. Involvement could have provided new or different insights into the data and may have supported more ownership and action in relation to the themes identified.

- The short timescale imposed by planning cycles limited the scope for further faculty discussion of the report prior to moving into planning our work programmes. Opportunities were therefore missed to discuss the content of the report in more depth.

- The need to demonstrate that all viewpoints were considered in the report meant that its breadth was significant. Whilst this offered many valuable perspectives it made the process of agreeing actions harder as faculty prioritised elements for discussion.

As an insider researcher, I found the process both educational and at times demanding. The interviews offered a privileged exposure to the views of colleagues but I had to navigate a balance between my dual roles as researcher and practitioner. This included

- bracketing my personal views during the interview process whilst also using my professional knowledge to guide enquiry,
- maintaining awareness of confidentiality in activities outside of the enquiry process (e.g. in subsequent faculty conversations),
- managing colleague expectations that I would endorse the views they expressed during interviews (reflecting the behavioural and identity issue noted by Coghlan, 1997),
- supporting an emancipatory oriented process that was occurring within the power structures of the team (i.e. acknowledging the legitimate right of a more senior faculty member to influence outcomes),
- ensuring my personal voice as well as my researcher voice was heard in discussions (as I moved between facilitation and participation), and
- avoiding confusion between these two voices as others began to associate the themes in the report with my views.

In relation to this last point, the views of Eichholz (2014) on group discussions are relevant. He notes that where groups do not have sufficient containment of the anxieties created by difficult conversations there is a tendency to adopt behaviours that lower tensions. Here, views on faculty development were potentially contentious as they implied dissatisfaction with current development opportunities. By staying silent about these during discussions of the report other faculty members in effect forced me to represent their views as I defended the validity of the report. Confidentiality meant that I could not suggest they defend their own views. This lowered their discomfort by temporarily transferring ownership of the issues to me. On reflection I realised that I should have tried to identify contentious issues in advance of discussions in order to create more containment and move towards what Eichholz calls 'mobilising dialogue' (ibid.).

Alongside this personal learning about the research process the enquiries also helped to challenge and shape my thinking.

- It prompted my greater awareness of how some faculty saw the knowledge domains as helping to normalise the uncertainty associated with transformational change (reflecting their on-going learning from the enquiry process described later in

Section 8.3). As well as helping participants in determining their actions, faculty were seeing the programme as supporting participant resilience and enhancing their feelings of self-efficacy. For me this started to recast the programme as a support mechanism for helping participants stay in what Heifetz, Grashow and Linsky (2009) call the 'productive zone of disequilibrium' where change feels possible.

- It helped me to appreciate how other faculty members were increasingly seeing TCSL programmes as offering professional development through reflection rather than instrumental learning. This shift in emphasis moved them closer to the views of Mowles (2015) and Westley, Zimmerman and Patton (2007) on the role of reflexivity in complex change. Personally this also prompted thoughts about potential parallels between our programme and the type of reflective processes seen in action research.

- I noticed a paradox underlying the faculty's understanding of transformational change. On the one hand there was a desire to consolidate an existing diverse range of knowledge domains to represent content as a coherent whole. Yet on the other was recognition that our knowledge was incomplete and open to revision.

8.2 Learning from chief executives

8.2.1 Overview

Between September 2016 and January 2017 an enquiry process was undertaken that was designed to generate data offering an expert perspective on transformational change. Three interviews took place with respected NHS Chief Executives and were used as case studies by the faculty to reflect upon the knowledge domains. These studies were seen as a way to challenge and shape faculty perceptions about change leadership by shedding light on the CMO configurations created in successful transformational changes.

Individual 'instrumental case studies' (Stake, 2000) based upon single interviews were chosen as the research strategy as they would provide contained, reflective accounts of expert practice. Here the boundary of each case was defined as the practice of the chief executives and was therefore not restricted to a single transformational change episode.

Jean Hartley (2004) suggests that case studies can be used to 'unfreezing thinking', rather than reinforce existing biases, if suitable research methods are used. In my researcher role I

therefore undertook a process that included interviews, thematic analysis and a facilitated discussion with faculty members about the findings. As a result, the case study themes went on to feature in a TCSL module and informed the decision to develop a new knowledge domain on 'Culture' that was introduced as a module in Cycle 4.

8.2.2 Enquiry details

Three highly experienced NHS acute trust chief executives were selected as a purposive sample representing respected authorities on major change. An initial approach to the chief executive of NHS Improvement to participate in this research led to him identifying two other highly regarded chief executives whom he felt could contribute to the research.

Since the purpose of learning from these chief executives was to inform faculty thinking about transformational change it was important to recognise and address any threats to the transferability of the learning. Two potential threats were identified.

- As leaders of acute trusts their views might be specific to that sector or to change within single organisations.
- Also, as chief executives they were working from a position of authority not always present in the cross-system change programmes typical in TCSL programmes.

To address these concerns all the interviewees were informed about the TCSL programme and the cross-system nature of the change projects brought to the programme. They were asked to focus their comments on learning that they believed applied to this context and were thus encouraged to identify transferrable aspects of their practice.

As two of the interviewees were identified as exemplars by the first, this was also recognised as a potential source of bias. This snowballing process could risk a reinforcement of the initial chief executive's views due to his selection of others with similar views. However, I felt that this risk was minimal as the two chief executives were widely accepted in the NHS leadership community as outstanding (e.g. being rated as the top two acute chief executives in a major NHS management journal).

As noted by Yazan (2015) it is often suggested that case studies are planned on the basis of a review of the relevant literature to guide enquiry. In this instance my existing knowledge of transformational change was used to shape the enquiry but I deliberately chose to keep my lines of enquiry quite broad to allow interviewees the latitude to provide any detail they felt relevant. In advance of the interviews all of the chief executives were provided with a

copy of the interview areas to be covered in the semi-structured interview. These included a wide range of topics (summarised in Figure 23) intended to guide them towards reflecting on their experiences.

Three broad areas to consider:

- Examples of major change that you have led or been part of – what made them succeed or fail?
- Examples of good public sector change leaders – what do they do and what skills do you notice?
- Your own practice as a change leader – what rules of thumb, techniques, tools or behaviours do you use?

Experiences:

- What lessons can be learnt about transformational change from your experiences?

Knowledge and skills:

- What knowledge and skills do leaders of transformational change need in today's NHS?

NHS Improvement's role:

- What should NHS Improvement do to support transformational change in the NHS?

General views:

- What does transformational change mean to you?

Figure 23: Main topic areas in the chief executive interview schedules

Consent to the interview process was verbally agreed with all chief executives at the start of the interview process. Anonymity was offered but declined by all of them. Similarly, they were offered the opportunity to review any summaries or analysis in advance of its use by the ACT Academy and this was also declined. The interviews lasted 40-70 minutes and were telephone based. They were recorded with permission to allow for later transcription.

After all interviews were completed I undertook a thematic analysis process based upon the approach described by Braun and Clarke (2006). Full thematic reports of each interview were then produced for the faculty.

The themes in these reports were displayed as images or 'cognitive maps' because as noted by McDonald, Daniels and Harris (2004, p.79) this helps to demonstrate how themes and their component elements are "interlinked, interrelated, interdependent and even tangled". Such visual representations therefore provided an interpretive aid to the discussions with faculty.

The cognitive maps shown in the following figures are taken from a summary presentation prepared for the faculty to review the findings. They therefore also include some discussion prompts.

Figure 24 shows the main findings from the first interviewee (designated as 'A'). Figure 25 expands the inset image for clarity.

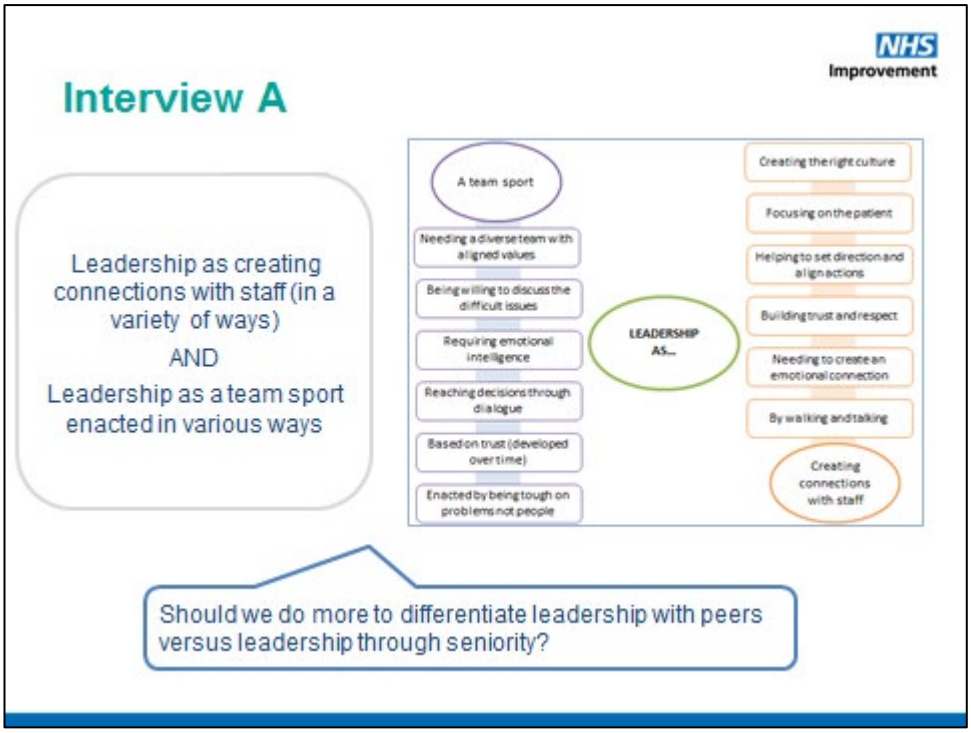


Figure 24: Cognitive map for a chief executive interview (referenced as interviewee A)

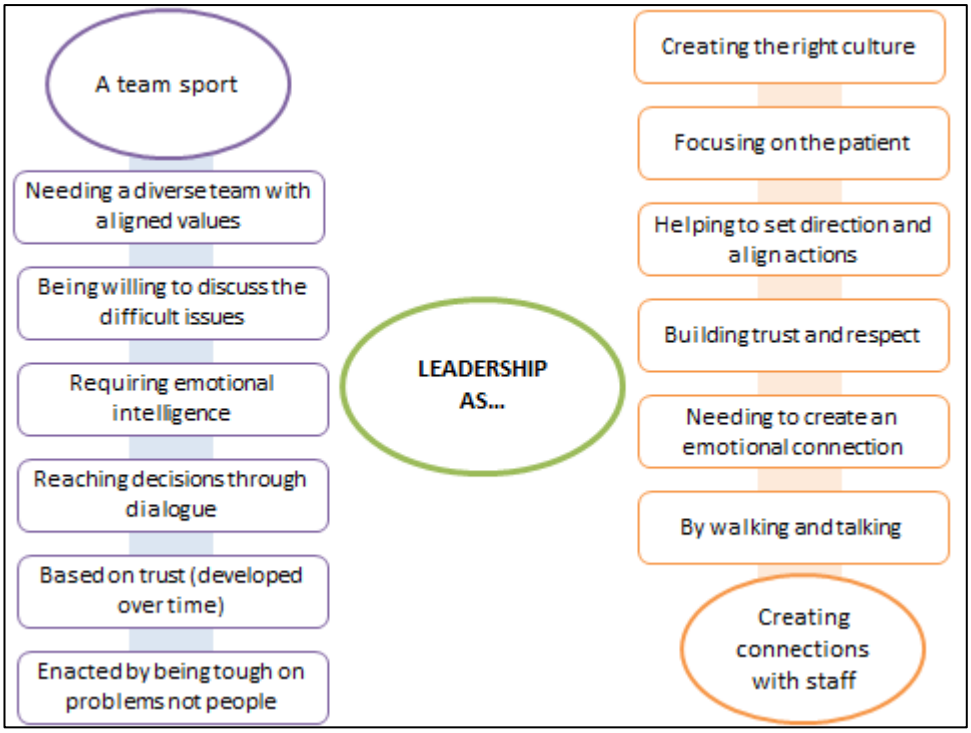


Figure 25: Expanded view of the chief executive cognitive map (interviewee A)

This interviewee primarily drew attention to two perspectives on the leadership of change.

The first was a leader's role in creating connections with staff. This was talked about as both a personal act and as something that should be a cultural norm for the wider senior leadership group. The attention to trust, respect, emotional connection, role modelling and direction setting described in the interview were similar to the 'transformational leadership' approach first described by James MacGregor Burns and later extended by Bass (Bass and Riggio, 2006). The additional suggestion of maintaining a focus on the patient, if viewed as a moral stance, provides the authenticity required by Burns to qualify the aforementioned characteristics as transformational rather than 'pseudotransformational' (ibid.).

In discussing the need for such behaviours to be embedded into the organisational culture, this chief executive saw transformational leadership as a widespread leadership activity. It therefore reflected a broad contextual requirement for major change that went beyond the chief executive role.

This diffusion of the leadership role was also reflected in the second perspective offered. This described the senior leadership group and how they function as a team. An effective team was viewed as requiring diversity but with alignment created through shared values and trust. Interpersonal conflict, potentially arising from diversity, was minimised through the separation of problems from the individuals involved in them (i.e. a depersonalisation

process). This view of diversity as beneficial yet potentially problematic is reflected in the broad literature on team diversity (van Knippenberg and Mell, 2016) where the role of shared values and taking a problem focus would be considered as 'moderating factors'. Here it could be hypothesized that diversity leads to the availability of a broad range of information on any problematic situation whilst the effective use of this information is supported (moderated) by shared values, trust and a problem focus that act to mitigate intergroup conflict.

In the interview context this view of top team diversity was inferred as a desirable characteristic for any team leading major change. This reflects the Smith and Tushman view (2005) that such teams create a diverse cognitive frame that supports dealing with paradoxical challenges. As noted in Section 4.1, dealing with paradox is an inherent feature of transformational change practice.

This chief executive also discussed the need to focus on the difficult issues. This reflected some awareness of how organisational defensive routines can act to supress threatening or conflict laden problems (Argyris, 1999). The solution to suppression was linked to emotional intelligence (Goleman, 1996) which is a capacity to be aware of and control one's emotions when interacting with others. Here emotional intelligence was seen as offering a form of containment for the anxiety created by difficult issues. This was expressed by the interviewee as the rule that "we should be tough on problems not on people".

The second chief executive ('B') chose to focus on culture as shown in Figure 26, describing the cultural features that supported change and how these could be created. Figure 27 expands the inset image for clarity.

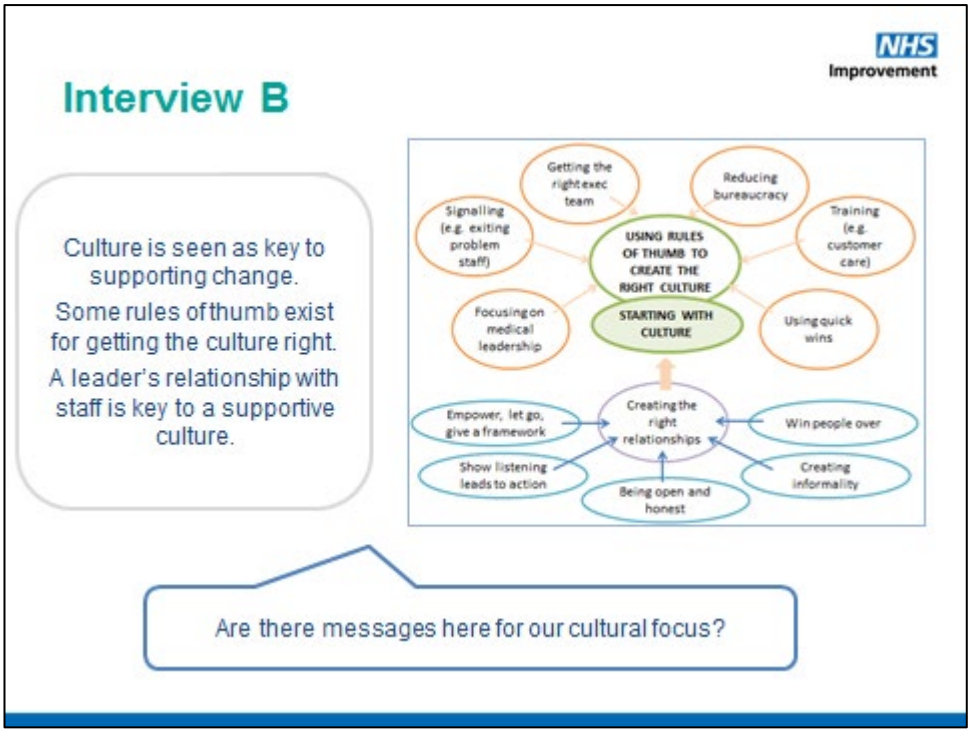


Figure 26: Cognitive map for a chief executive interview (referenced as interviewee B)

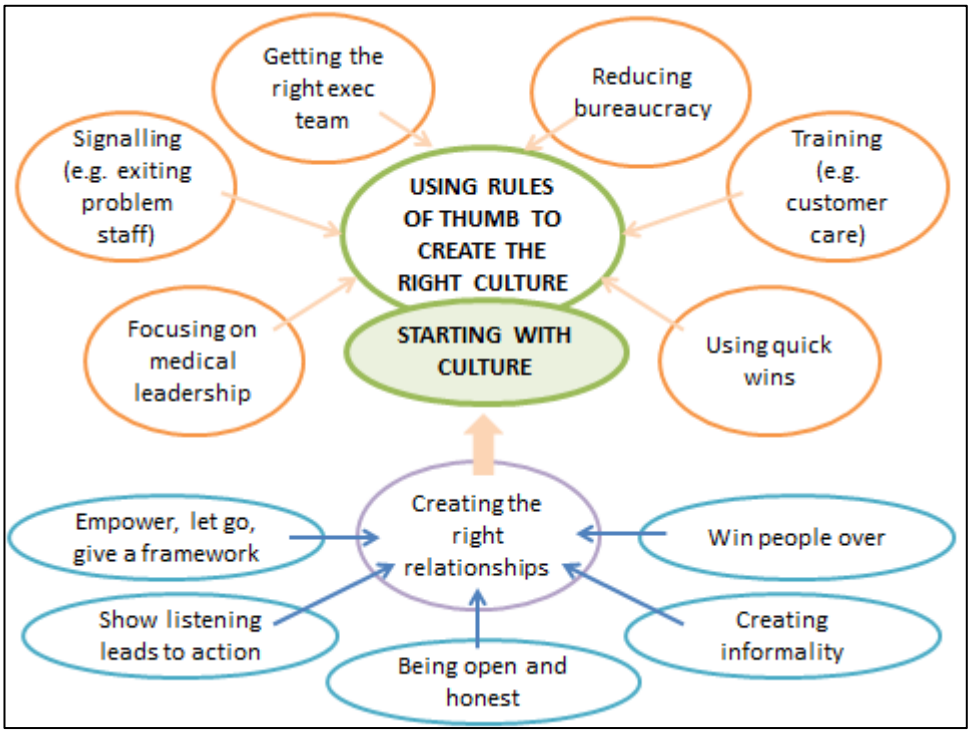


Figure 27: Expanded view of the chief executive cognitive map (interviewee B)

The desired culture was one where leaders empowered others, listened (and acted) and was characterised as open and honest. References to creating informality further emphasised how this chief executive saw change as requiring the removal of hierarchical aspects of organisations. This reflects a closing of the 'power distance' dimension of culture described

by Hofstede (2001). However, like the previous interviewee this chief executive also implied a transformational leadership approach in their focus on personal direction setting and winning people over to align them with this direction.

Discussion of how to create the right culture echoed the first interview with mention of the importance of the right top team. In addition, the NHS setting was reflected by an emphasis on the importance of medical leadership and in particular their function as role models for other clinicians. In the literature it is suggested that behavioural change in others through role modelling occurs through the provision of behavioural examples, inspiration and a demonstration of what is possible (Morgenroth, Ryan and Peters, 2015). Thus in a hierarchical NHS where the medical profession holds significant power, medical leaders can embody for colleagues the closure of the power distance dimension.

The other actions described as part of creating the right culture can be understood using the artefact view provided by Johnson (2000) as the 'cultural web'. For example, the conscious use of signalling could be considered here both as a symbolic act and a source of future organisational stories, two of the artefact categories described by Johnson. Similarly, the use of training to reinforce cultural norms would be considered one of Johnson's rituals or routines.

Within these themes and those in the previous interview there are also consistent messages about connectedness, honesty and the need for vertical communication. Hierarchy is recognised but consciously broken down.

These concepts were also strongly present in the final interview ('C') where the cognitive maps are shown in Figure 28. Figure 29 and Figure 30 expand the inset images for clarity.

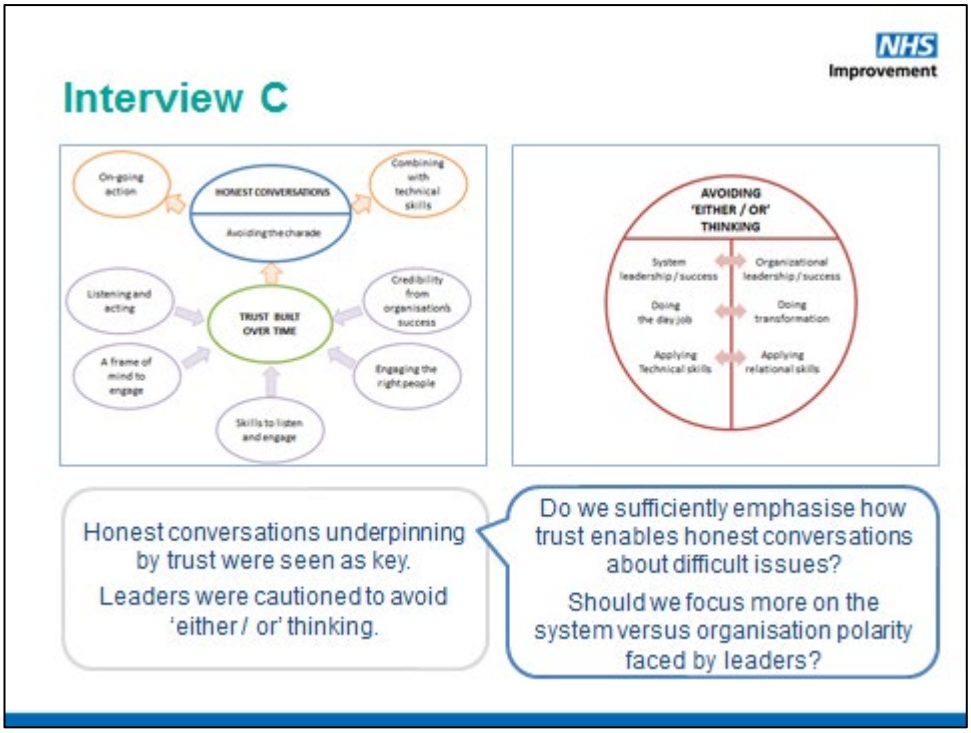


Figure 28: Cognitive maps for a chief executive interview (referenced as interviewee C)

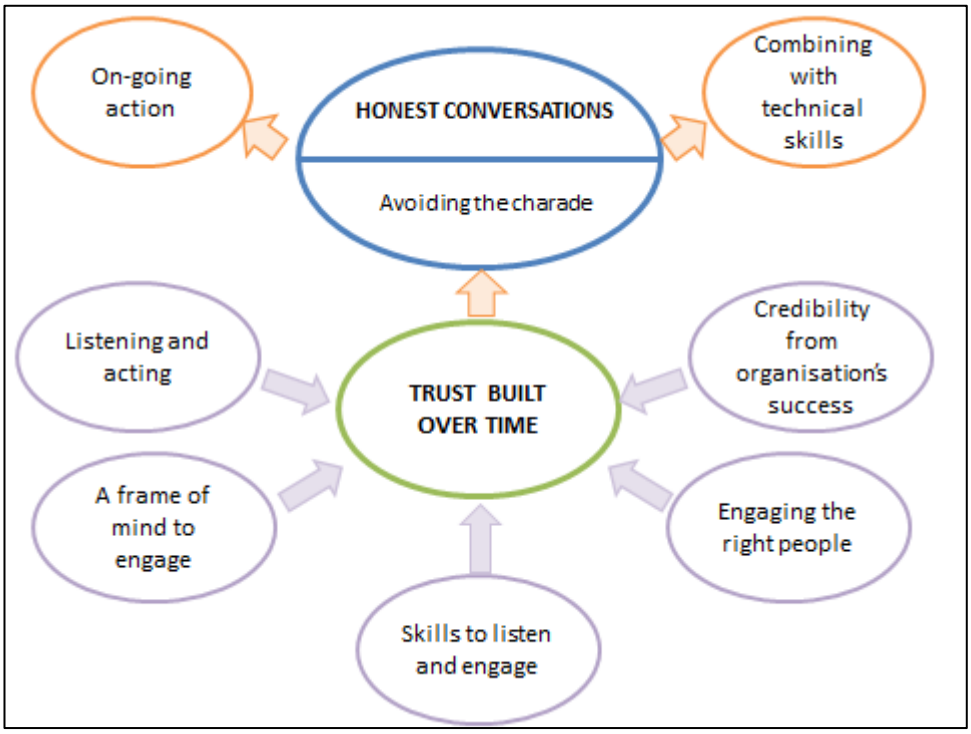


Figure 29: Chief executive cognitive map (interviewee C, first map)

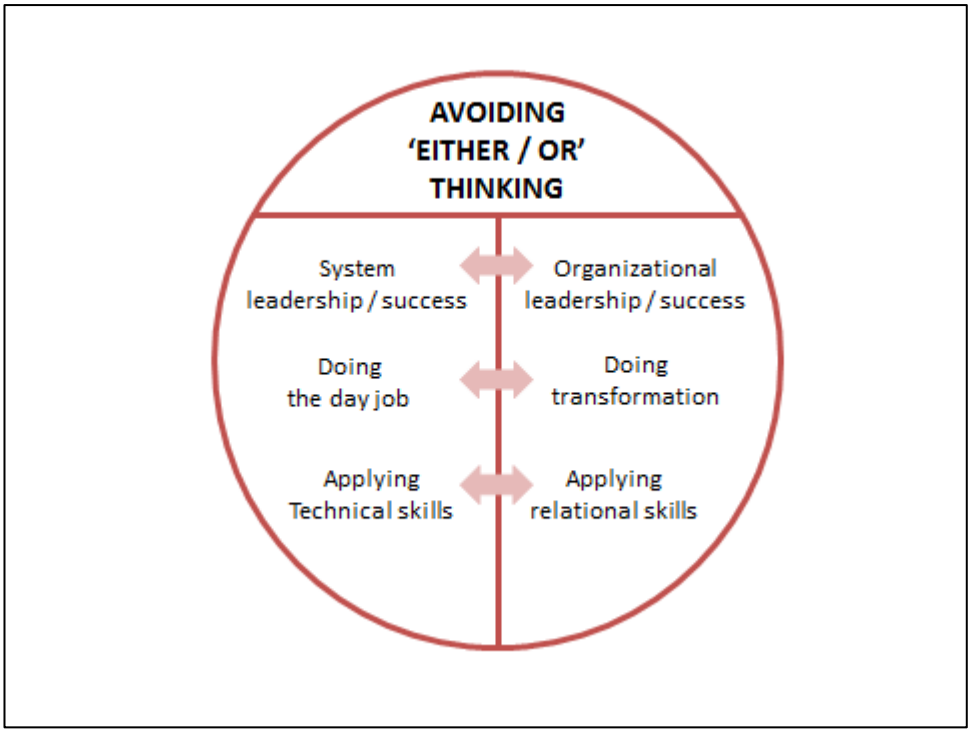


Figure 30: Chief executive cognitive map (interviewee C, second map)

At the heart of this interview was the need for "honest conversations" in change activities, underpinned by (and helping to create) trusting relationships that were built over time. Where such conversations were absent, this was described as a "charade" that was easily seen through by stakeholders and patients alike.

Here, trust was treated as a core element of the change process. Whilst different definitions exist for trust one of the most often cited is by Mayer, Davis and Schoorman (1995 p. 712), "the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party". Such an action based definition helps to make clear why trust can be viewed as important in a transformational setting where action needs to be coordinated across multiple organisational boundaries.

In addition, from their review of the literature these authors suggest three factors affecting trustworthiness: ability, benevolence and integrity. In Figure 28, ability is described in terms of credibility gained through prior actions and the demonstration of action following listening activities. Benevolence appears to be represented by the emphasis on a mindset of engagement. Integrity is not directly addressed in Figure 28 but featured in interview 'A' (where trust was also explicitly identified) as a focus on the patient (i.e. the existence of an underpinning acceptable value set).

This chief executive also emphasised the need to avoid 'either or' thinking when working on system-wide change. This is a direct recognition of some of the paradoxes or polarities involved in change (Section 4.1). In this interview they were presented in the context of 'honest conversations', forming a link between paradox and the need for dialogue. A similar link is also seen in the views of others such as Johnson (1992) and Mowles (2015).

The interviews were discussed with the faculty in February 2018. Alongside the interview reports faculty were provided with a summary of the high level themes identified when the interviews were considered collectively. These themes are shown in Figure 31 and Figure 32 (again taken from slides used in the discussion).

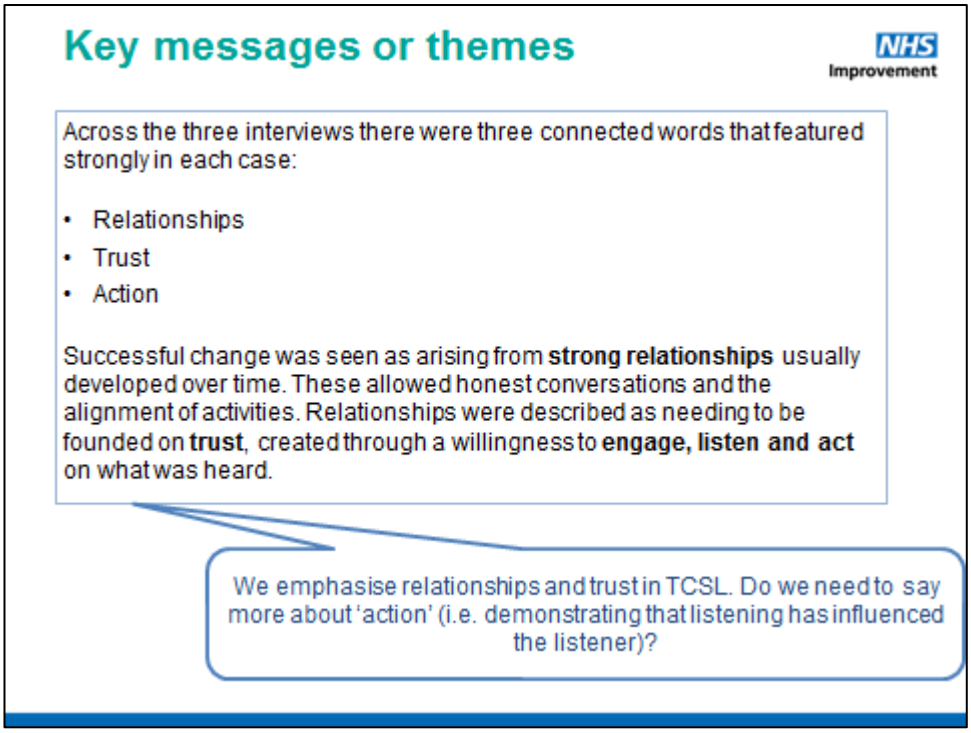


Figure 31: Themes represented across all chief executive interviews

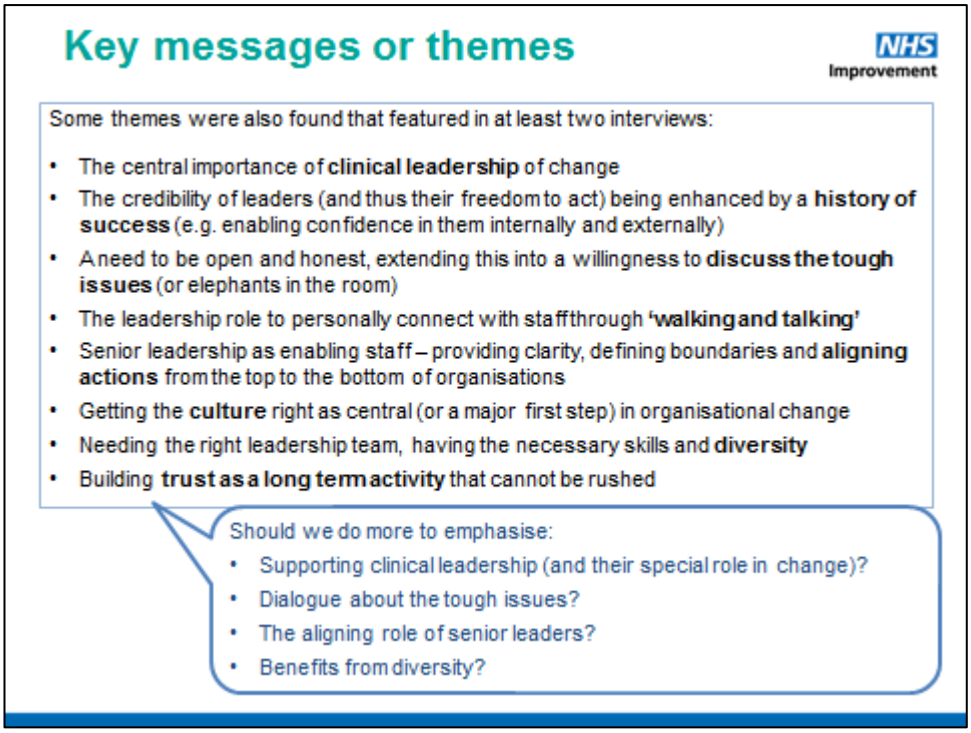


Figure 32: Themes represented across at least two chief executive interviews

Faculty were also provided with access to quotations linked to the summary themes to allow a validity assessment. These were also intended to act as examples to be used as appropriate in TCSL programmes to illustrate module content. Some examples of categorised quotations are shown in Figure 33.

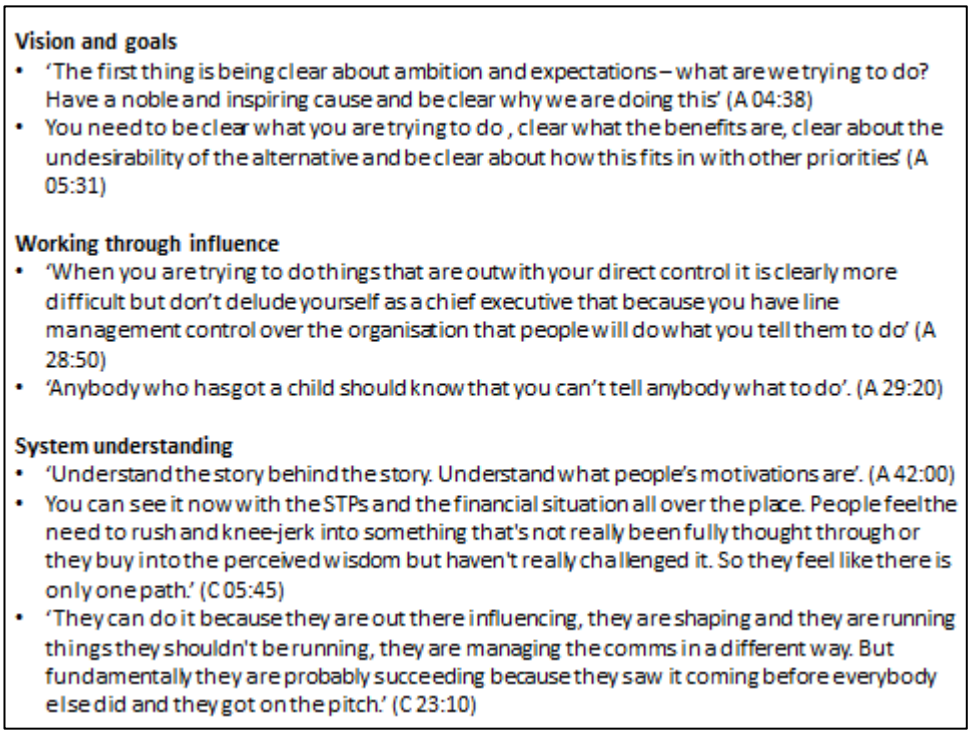
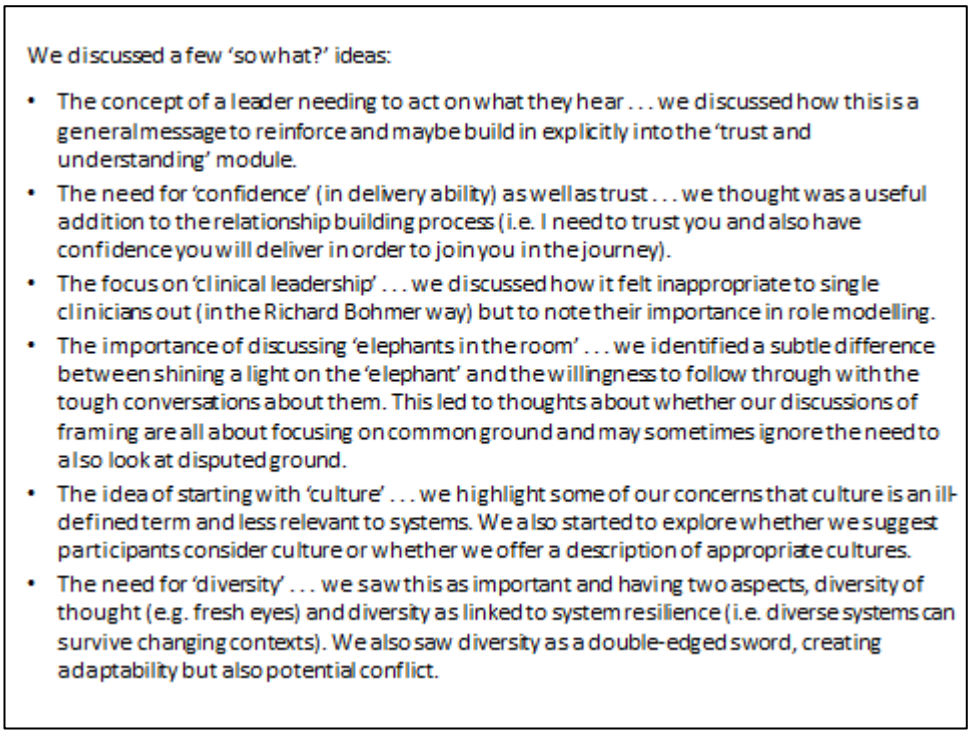


Figure 33: An extract of chief executive quotations under theme headings

The broad discussion that took place about the chief executive interviews was summarised in an email to the faculty. An extract provided in Figure 34.



We discussed a few 'so what?' ideas:

- The concept of a leader needing to act on what they hear . . . we discussed how this is a general message to reinforce and maybe build in explicitly into the 'trust and understanding' module.
- The need for 'confidence' (in delivery ability) as well as trust . . . we thought was a useful addition to the relationship building process (i.e. I need to trust you and also have confidence you will deliver in order to join you in the journey).
- The focus on 'clinical leadership' . . . we discussed how it felt inappropriate to single clinicians out (in the Richard Bohmer way) but to note their importance in role modelling.
- The importance of discussing 'elephants in the room' . . . we identified a subtle difference between shining a light on the 'elephant' and the willingness to follow through with the tough conversations about them. This led to thoughts about whether our discussions of framing are all about focusing on common ground and may sometimes ignore the need to also look at disputed ground.
- The idea of starting with 'culture' . . . we highlight some of our concerns that culture is an ill-defined term and less relevant to systems. We also started to explore whether we suggest participants consider culture or whether we offer a description of appropriate cultures.
- The need for 'diversity' . . . we saw this as important and having two aspects, diversity of thought (e.g. fresh eyes) and diversity as linked to system resilience (i.e. diverse systems can survive changing contexts). We also saw diversity as a double-edged sword, creating adaptability but also potential conflict.

Figure 34: Email summarising the discussion of the chief executive interviews

This discussion sought to determine how the interview themes should influence the knowledge domains. As can be seen, the conversation led to suggestions about the need to reinforce some pre-existing content whilst also providing new dimensions to our thinking in other areas. It can also be seen how faculty used their own professional knowledge to interpret and sometimes challenge the thinking of these chief executives. Discussion therefore became part of a wider sense-making process, influencing the faculty views on transformation and how we portray transformation in the TCSL programmes.

8.2.3 Reflections

This enquiry arose from a desire to inform faculty perspectives on the knowledge domains through the provision of external, expert perspectives. It was intended to act as a stimulus for new thinking in the faculty about transformational change and Figure 34 illustrates that this was achieved. The instrumental nature of the case studies also meant that they could be used with participants to inform their approach to change, forming part of a module introduced in Cycle 4. In that same cycle the focus on culture within the interviews provided the stimulus to also create a new module on this topic.

The research approach undertaken was broadly successful. The chief executives reported that they had used the interview guide as a stimulus for pre-interview reflections and that the semi-structured nature of the interviews provided sufficient flexibility to explore their practice. All of the interviewees complied with the request to try and contextualise their comments for TCSL participants and to focus on what they saw as transferrable themes. However, some emphasis on change within single organisations and the executive role was noticeable.

Overall the choice to create individual instrumental case studies as well as generate cross-interview themes was helpful. It provided self-contained descriptions of practice whilst also demonstrating broadly similar perspectives across the three chief executives.

Methodologically the main weakness of the research process was its reliance just on interviews with the chief executives. Interviewing others involved in the changes mentioned or observing the chief executive practices would have helped to triangulate the interview findings. These additional research activities were however not logistically feasible but remain an option for future research.

As an aid to the AR processes described in later chapters it was noted that the initial faculty interest in the interview findings was lower than hoped for. This may have been due their lack of involvement prior to the report stage meaning they had not experienced immersion in the data and had therefore not developed any ownership of the themes or cognitive maps. In the terminology of Heron and Reason (2008), I had not provided them with access to the direct 'experiential knowing' that could have reinforced the 'propositional knowing' that I offered in my analysis of the interviews. In addition, the research oriented nature of the enquiry may have reinforced a view that this was a personal rather than faculty project, lowering motivation to engage with the findings. These two factors suggest that in adopting my researcher role I had inadvertently distanced other faculty from seeing themselves as co-researchers.

Despite the limited faculty engagement in this enquiry process the interviews still remained a rich source of information about transformational change practice. They also offered some insight into potential CMO configurations that the chief executives saw as important in transformation. Figure 35 takes some of the key activities they described and hypothesises their related mechanisms (i.e. how they might enable or support change).

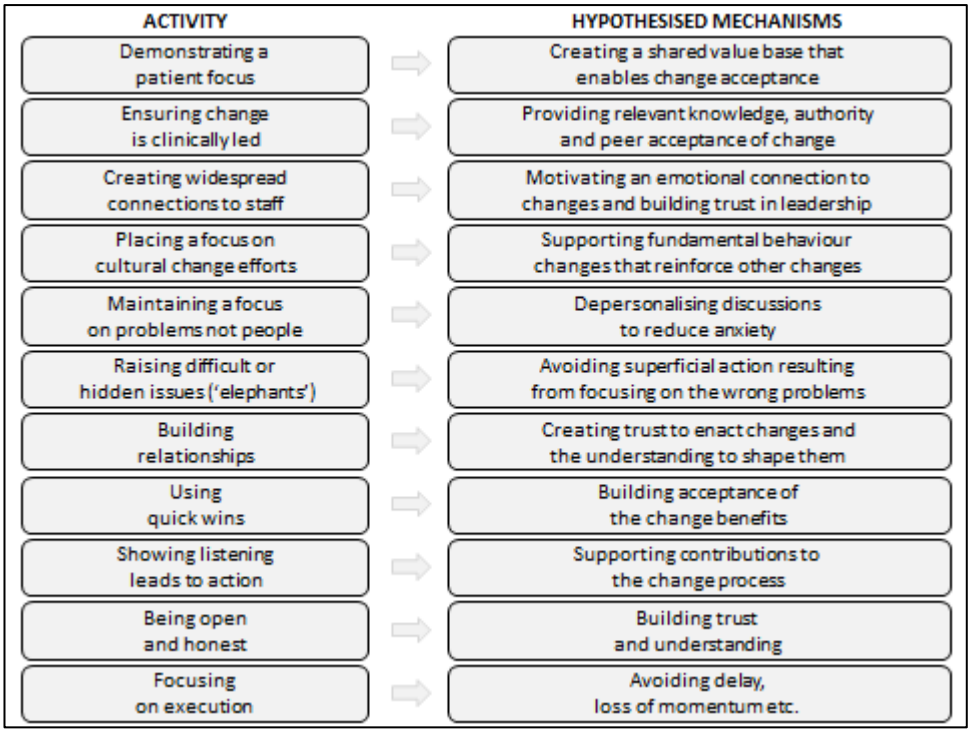


Figure 35: Hypothesised change mechanisms from the chief executive interviews

The chief executives also identified contextual factors that were important in change. These are described in Figure 36 (rephrased if necessary so that all are enabling contexts). In the figure these are linked to hypothesised mechanisms that might be impacted upon by these contexts (i.e. the reason why a specific contextual factor might be important).

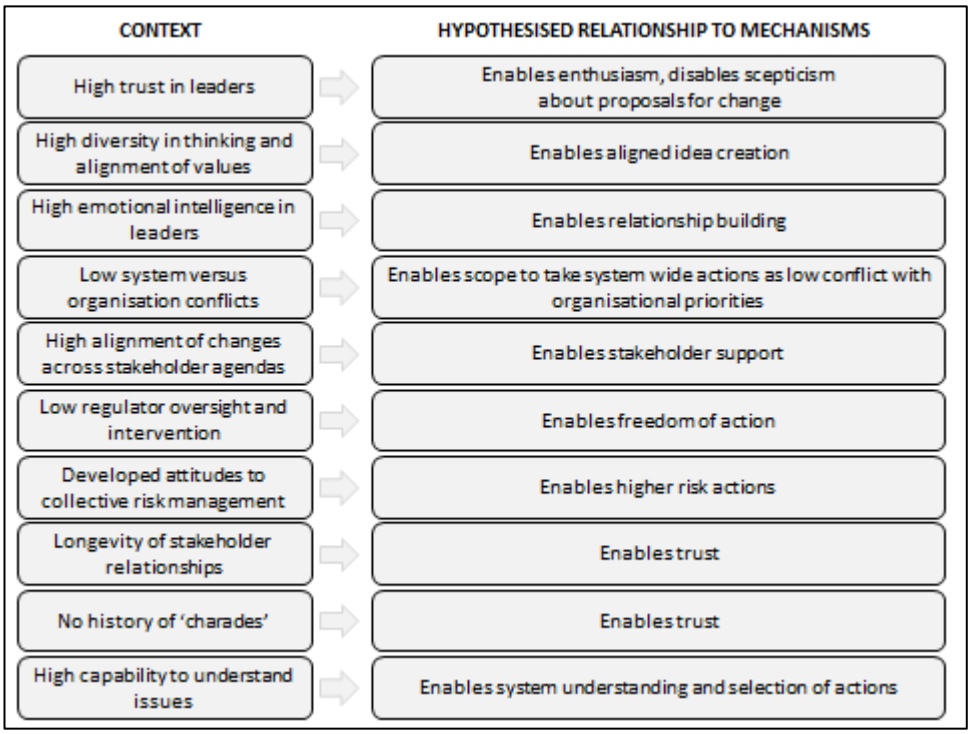


Figure 36: Contexts and their hypothesised relationship to mechanisms

These two figures appear separately as the chief executives did not talk directly about CMO configurations, instead referring separately to activities and contexts. However the two figures start to suggest some interesting patterns that reinforce the relational orientation of the approaches to change that were being described. Further research with the chief executives would be valuable to confirm whether the hypotheses in the above figures are valid representations of the chief executive views.

8.3 Creating longitudinal system case studies

8.3.1 Overview

In 2015 the faculty were interested in expanding our understanding of how TCSL participants were using the programme's content in their change projects. As discussed in Section 5.2, gathering relevant data about the use of content outside of workshops is beset with challenges. However, it was recognised that a partial understanding could be gained by interviewing participants over an extended year-long period as they initially encountered the TCSL content and then went on to apply it in their systems. This longitudinal approach was both a consequence of the timescales involved in major change and the faculty desire to get beyond what Barley describes as "presentational shows" (Barley 1990 quoted in Hartley 2004 p.325). By periodically following up with participants we could explore the relationship between intentions, actions and outcomes. Time would also allow participants more opportunity to use and reflect upon the content of the TCSL programme.

A case study approach was adopted as this would allow an explicit focus on the context of their change activities (Hsieh, 2004; Robson, 2011; Yin, 2009). Participants in the 2015 team programme were approached to volunteer for the case studies which would involve three interviews with pairs from individual teams as they initially learnt and then applied the TCSL content to changes in their systems. Out of five initial pairs, four pairs eventually completed the process in late 2016 coinciding with the early AR cycles described in Phase I. Interview transcripts were reviewed during the process to inform later interviews and a full thematic analysis was undertaken in 2017, coinciding with the Phase II cycles. Faculty members were involved throughout this process and the findings eventually featured in a module delivered in the TCSL programme described in Cycle 4 in Phase III. In 2018 the case studies and

accompanying analysis were also published in an academic journal (Tweed, Singfield, Taylor, Gilbert and Mount, 2018).

8.3.2 Enquiry details

In 2015 I offered to support the faculty by leading a research process to develop longitudinal case studies based upon the experiences of participants in our programmes. The aspiration was to follow the progress of participants from the 2015 cohort as they developed their understanding of TCSL content and went on to apply this over a 12 month period.

Programme application processes meant that participants could not be asked to be part of this research until they had commenced on the programme. Therefore in their first workshop participants were told about the research purpose and process, including provisions for anonymity and withdrawal. Volunteer teams were requested where each team would be represented by two members who would be interviewed three times over the year.

Five teams volunteered to participant. One later withdrew early in the research when the team representatives changed roles. The partial data from them was excluded from the eventual analysis. Typically the pairs from each team included one person at director level and one in a more operational or programme management type role.

Initial interviews were arranged for approximately one month after the first TCSL workshop. In preparation I developed and shared with interviewees an outline of the areas to be covered in their semi-structured interview. This included background on their project, the types of actions they had undertaken or were planning and personal reflections about their approach to leading change. The outline deliberately did not focus explicitly on the knowledge domains in order to avoid biasing their responses (although recognising that their attendance at the first TCSL workshop would provide a frame of reference for them). Interviewees were also given further information on consent and confidentiality and were asked to confirm that they wished to continue.

Telephone based interviews were used throughout this enquiry process. All interviews were recorded with participant permission and subsequently transcribed. For all interviews, except one, I led the interview with another faculty member present to listen and add questions at the end. This allowed a wider exploration of the interview content and gave other faculty members direct exposure to participant views. Immediately after each interview the faculty interviewers shared and captured observations about it.

Following each interview the transcript was used to identify areas to follow-up with each pair of interviewees. This included progress with proposed actions and exploration of the interviewees' evolving awareness of their personal change practice.

The second round of interviews occurred approximately six months after the first round (three months after the conclusion of the TCSL programme). The third and final round of interviews took place approximately 12 months after the initial interviews. For these final interviews each pair was sent a customised interview schedule that reflected their case study story to date. It also included specific follow-up areas identified through a review of their prior interview transcripts by two faculty members (me included). This supported the process of capturing an accurate factual and reflective account of their approach to their project.

Full analysis of the interviews was delayed until 2017 due to limited faculty capacity. I jointly led this process with a colleague who had previous qualitative research experience. We utilised a template analysis approach (King, 2004b). Template analysis does not refer to a prescriptive method but instead relates to a range of techniques for thematic analysis based upon pre-defined and emergent codes. Throughout the analysis process these codes are modified or added to until the researcher is satisfied that the resulting 'template' captures all data of relevance to the research questions. Here, the participants' exposure to the TCSL programme meant that its content could be used as the early coding framework.

Due to the volume of data, coding was divided between us with each focusing on two teams. However, the emerging codes were discussed regularly to maintain consistency in line with the guidance from Braun and Clarke (2006).

Once initial coding was complete, the early codes were reviewed with colleagues in the ACT Academy. As a result of this process and the coding experience I was concerned that our granular coding approach had begun to disconnect data elements from their context within each interview. I therefore suggested that we re-group interview data into what became termed 'micro-stories'. These represented excerpts from the interviews with each pair (sometimes spanning more than one interview) that told a story in their own right. Micro-stories provided a means to maintain the context of the coded data, supporting the interpretation of codes and maintaining the visibility of how coded items were connected to each other.

The micro-stories were each collated as short reports so that they could be shared with other ACT Academy members as part of the analysis process. Each included a short narrative describing the story with illustrative quotations. They also contained links to relevant knowledge domains (or change management theories) and personal faculty reflections on the learning from the micro-story. Collectively these micro-story reports were intended to present a rich, interpretive account of the story through which the validity and relevance of its associated codes could be easily assessed.

In total 67 micro-stories were identified across the four case study teams. Figure 37 lists the titles of stories generated from one team and an illustrative example is given in Appendix E (story 2 in the figure). Labelling the stories in this way allowed for stories to be easily recalled in discussions and to identify the essence of each story. Coded data was allocated against these micro-stories.

1. Deliberately signalling the importance of a change through appointing senior leadership
2. The importance of having personal drivers when leading a change programme
3. Recognising inhibitors and enablers of transformational change
4. Enabling shared leadership through common direction and learning
5. Leading the change process by building a platform of trust and understanding
6. Change as a double act of adaptive and technical elements
7. The challenge of balancing the benefits of a standardised approach with flexibility for local variation
8. Data and evidence as a key component of creating engagement
9. Recognising that even a single stakeholder organisation can offer multiple faces
10. Setting up a community of practice with those facing similar challenges
11. Valuing the experience of TCSL in shaping their practice
12. Shifting their personal perspectives on leading change
13. Recognising the role of system history in the change process
14. The transformation process as an iterative journey
15. The challenge in dealing with the external expectations of the change process
16. Exploring the role that chief executives play in the change process in relation to other change leaders
17. Being mindful of the language used in the change programme
18. Shifting from leading from the front to leading from behind
19. Questioning how to measure success
20. Recognising the impact of the unexpected
21. Balancing machine and evolutionary approaches to managing the change process
22. The role of opportunism and timeliness
23. Wanting support in designing and facilitating events

Figure 37: Micro-stories generated for one system

The micro-stories also provided an intuitive way to involve others in the analytical process. Together with the interview transcripts they were given to two other ACT Academy members for review. The faculty interviewer with qualitative research experience then designed and facilitated a group discussion to validate the codes against the micro-story content and begin the higher level thematic interpretation.

Figure 38 shows an image used in this process where early high level themes are linked back to the micro-stories for one system ('E'). Micro-stories are referenced by a code number and linked to sub-themes.

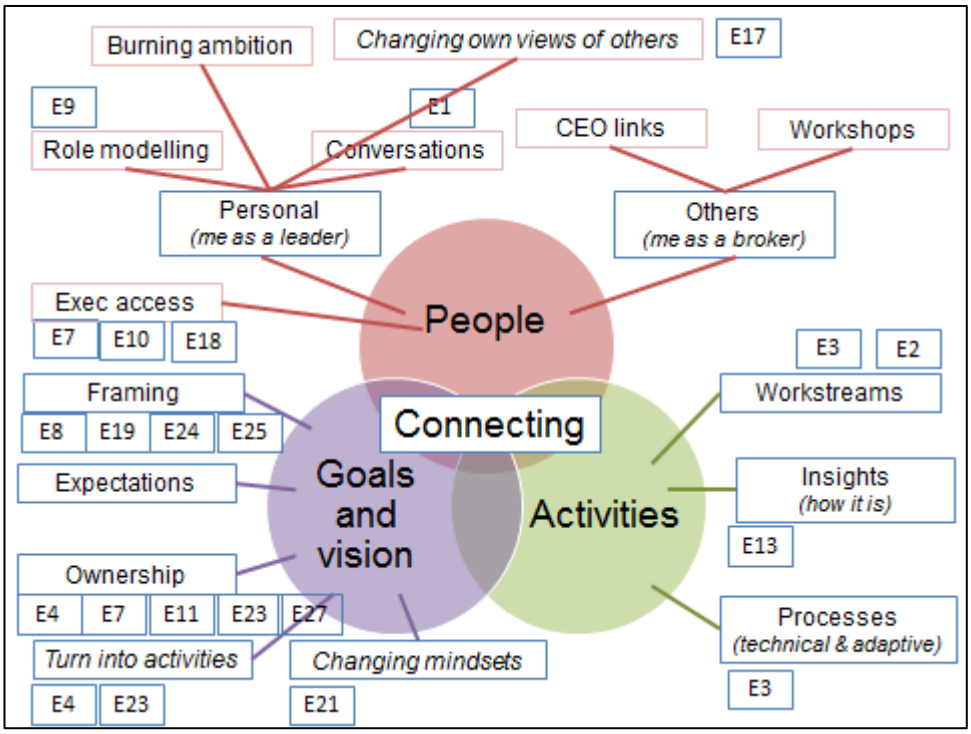


Figure 38: Micro-stories from one system ('E') linked to the main themes

The final thematic model was depicted as two diagrams as shown in Figure 39 and Figure 40 where some of the terms used in the figure above have been modified slightly as a result of the analysis process.

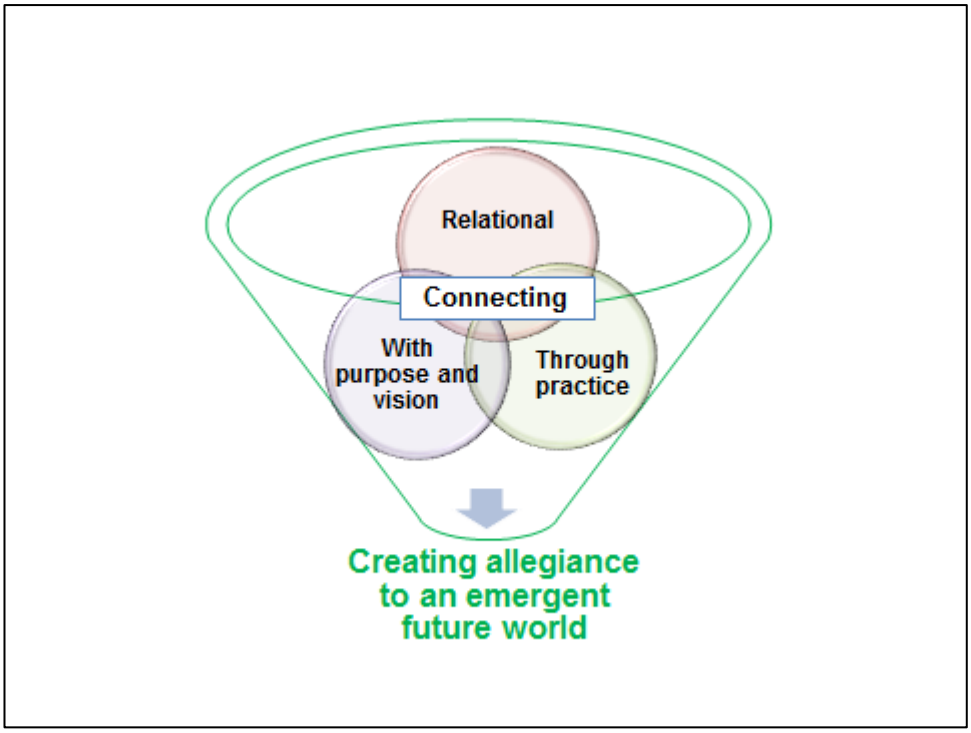


Figure 39: Pictorial representation of the case study themes (first element)

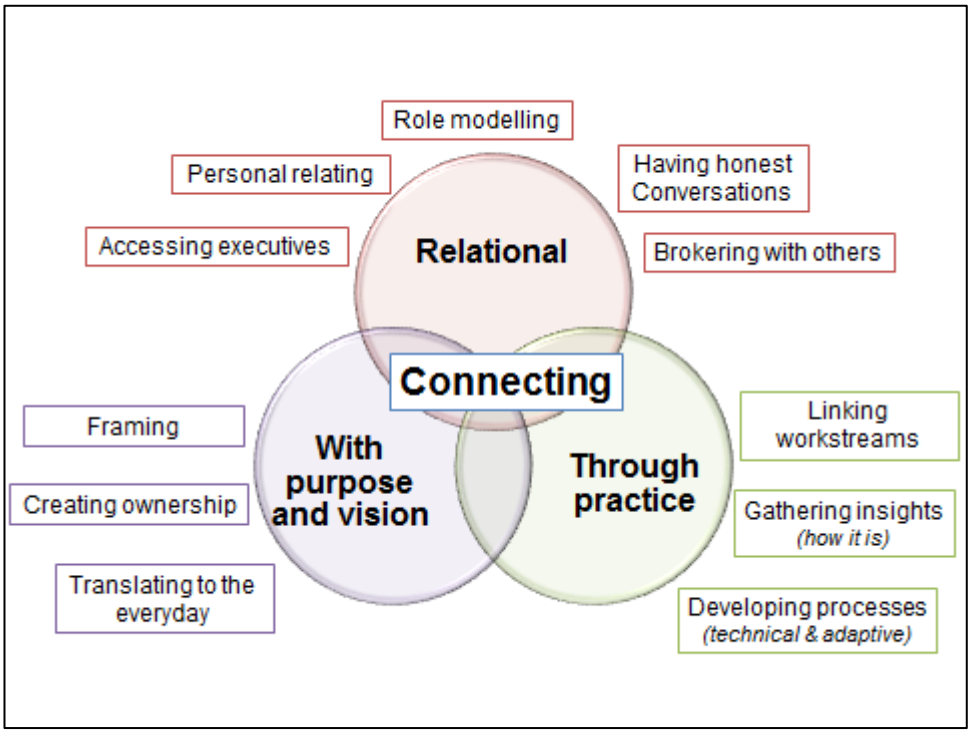


Figure 40: Pictorial representation of the case study themes (second element)

In Figure 39 the image is based upon an overarching theme of 'Creating allegiance to an emergent future world'. This phrase, emerging from the group discussion, was used to capture the overall thrust of the activities described by participants. They saw themselves as encouraging others to work towards an uncertain, emergent future. This was termed

'creating allegiance' to signify the commitment and alignment they were attempting to create. Figure 40 illustrates how allegiance was achieved through three types of connecting actions. Participants were forming relational connections both for themselves and others. They were connecting people to the vision and goals for the change. They were also seeking to connect together practices, ensuring the change process was coherent and activities aligned.

In addition to these figures, three further theme areas were identified as shown in Figure 41.

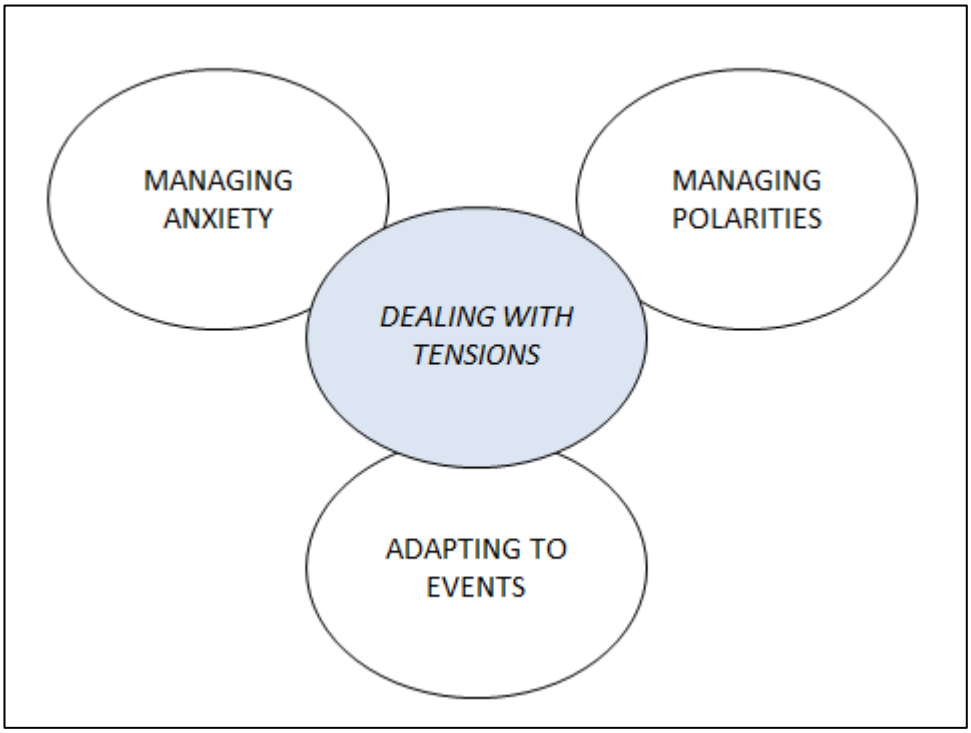


Figure 41: Additional case study themes centred on the need to deal with tensions

These themes relate to the central concept of needing to deal with some of the tensions inherent in transformational change.

- Frequent mention was made of the need to manage anxiety. At times this was personal (e.g. their anxiety due to uncertainty). It was also about managing the anxieties of others involved in the change process.

- Significant adaptation, both opportunistic and reactive, was required by those leading the change activities. This came in response to alterations in the system or its context.

- Participants often talked about managing opposing yet complimentary priorities (here termed polarities following Johnson, 1992). For example gaining the respective

benefits of seeking standardised service models across their system whilst allowing variation based on local needs.

The themes and micro-stories were shared across the wider faculty and went on to feature as a reference point in numerous discussions.

During Cycle 5 the faculty considered the case studies alongside the learning from the chief executive interview process described in Section 8.2. This led to a range of observations.

- Both the case studies and the chief executive interviews had themes reflecting the importance of having honest conversations when leading major change. In both, these were related to trust building and the need to recognise (and tackle) underlying issues that might inhibit change.

- A kind of inverse relationship was suggested as existing between Figure 39 and Figure 41. Connecting (in Figure 39) was understood as creating relationships between 'knows' whereas Figure 41 appeared to be much more focused on the difficulty of managing 'unknowns'.

- Faculty felt that the micro-stories themselves had value as illustrative narratives about change practice that might be helpful to future participants.

- The theme of 'connecting' led faculty to consider different metaphors for the role of change leaders and how we interpret the role of leadership. Leaders as a 'glue', 'the water that binds ingredients in a cake' or as 'the oil in the gears' became vehicles for exploring how we conceptualised leadership.

This discussion was also used to challenge the validity of the research findings. Faculty considered whether the analysis could have been unconsciously biased towards interpretations reflecting the knowledge domains. Ultimately however the rigour of the interviews, coding and theming led faculty to conclude that our findings were representative of the experiences of these teams.

8.3.3 Reflections

This enquiry process involved faculty members in both the interviews and analysis. Because of this and the extended time period for these activities, the learning fed into multiple faculty discussions and subsequent actions. This can be most clearly seen in

- the faculty interviews (Section 8.1) where some viewpoints clearly reflect these participant experiences;

- the creation by a faculty member of a new module on resilience (introduced in Cycle 4), arising from the findings about the need to manage tension;

- proposed changes to the TCSL programme design to support greater faculty interaction with participants that reflected how participants saw faculty as adding value; and

- the use of the case study themes in a module introduced in Cycle 4.

As hoped for, the longitudinal exploratory nature of the case study approach was valuable in capturing and critically examining the stories of participant change experiences. The decision to include micro-stories into the analysis process facilitated deeper connections between the coding process and participant contexts. This had the added benefit of aiding the involvement of other faculty members in the thematic analysis which ultimately meant wider ownership of the case study findings.

The overall approach had some weaknesses.

- The case studies were based upon volunteer systems and thus may have attracted pairs with different characteristics to other TCSL participants (e.g. more reflective or more attracted to TCSL content). Faculty therefore had to make a judgement about the transferability of the themes identified.

- The studies only used the single method of interviews, which according to Yin (2009) would potentially negate them being described as case studies. However, as rich or 'thick' descriptions (Geertz, 1994), they still provided faculty with evidence to inform judgements about the on-going development of the knowledge domains and TCSL programmes. The use of multiple interviews that allowed a revisiting of discussions from earlier interviews also added to the credibility of the eventual findings.

- The template analysis approach coupled with faculty member coding risked an over-emphasis on the knowledge domains. This was however mitigated through peer challenge. Also, to a degree, wide latitude to interpret data in light of the knowledge domains was accepted as beneficial. It supported the objective of identifying new aspects or interpretations of the domains.

- My colleague and I recognised that on occasion our personal interests had influenced our coding. For example paying more attention to the psychological aspects of change or the existence of polarities (as respective areas of interest). This awareness however allowed this bias to be challenged in both the coding process and the theming activities as we discussed our coding decisions.

The methods used also had some unexpected benefits. The decision to interview pairs was originally based upon a recognition that the nominated team 'leads' who were most likely to be put forward for interviews were not always the most senior of influential members of their teams. We therefore wanted them to be accompanied in the interviews by someone likely to be playing a leadership role in the change activities. However, interviewing pairs was also found to sometimes provide contrasting perspectives on the same phenomena as well as interactions where interviewees would discuss each other's practice. Another benefit was that we found participants often valued the interview process as a reflective opportunity. This finding, discussed with other faculty members, seemed to enhance faculty interest in having closer coaching-type interactions with participants.

The case studies also served a useful role in challenging some of the premises held by the faculty. We had assumed (and hoped) that our TCSL tools and techniques would be used en masse in systems but instead found that it was more common for their principles to serve to modify existing participant practices. This shifted our view of TCSL away from instrumental learning towards it being a process that built tacit knowledge that had to be linked to professional practice. This latter perspective was more in line with Schön's (1983) view of professional knowledge. This had a significant impact upon the decision towards the end of Phase II to emphasise the integrated nature of TCSL content and to encourage participants to develop their own models of change.

Similarly, as a faculty we had begun to position leadership as a relationship between participants (as leaders) and others in their system. Yet the case studies showed a significant leadership role in brokering relationships between others. This started to shift our thinking away from some of the dominant health care discourse on leadership (e.g. West et al., 2017) towards new enabling or boundary spanning roles (e.g. as described by Ernst and Chrobot-Mason, 2011).

The case studies also provided further evidence to reinforce perspectives held by the faculty. For example

- Interviewees repeatedly emphasised the importance of 'trust' in the relationships involved in major change. It was found that their views echoed the assessment dimensions described by Feltman (2011) of sincerity, reliability, competence and care. They also associated trust with another TCSL knowledge domain of 'Emotional intelligence' (Goleman, 1996).

- There was repeated mention of the importance of goal alignment and how a vision and acts of 'framing' (Fairhurst, 2005) played importance roles in this. These reflected existing messages within TCSL programmes.

- The interviewees consistently drew attention to the emergent, unpredictable nature of their systems as they underwent change. This strengthened our belief in the relevance of change approaches based upon a complex adaptive view of systems (e.g. Zimmerman, Lindburg and Plsek, 1998).

- Various interviewees gave examples of how they had needed to manage polarities (or paradoxes) in their changes. This supported our view of the central importance in transformation of working with these types of unresolvable challenges (as described by Johnson, 1992 and Mowles, 2015).

- Noticeable across some of the case studies was the way in which interviewees felt that shifting their leadership approach away from a mechanical view of systems had helped them progress their changes. This reinforced the benefits of the shift in perspective suggested in TCSL.

In undertaking this enquiry process I also learnt about myself as a researcher. I recognised how the participatory nature of this enquiry sometimes ran contrary to my own desire to control the research process. Here I was fortunate that I had a colleague with expertise in qualitative research who wished to shape the analysis, but still it created within me anxiety about 'my research' becoming 'our research'.

I also learnt about the process of research. My suggestion of using micro-stories was not grounded in existing methodology but instead was derived from a sense-making reaction to the ways in which a coding process can divorce data from context. It came from both a realist's belief in the importance of context and a pragmatist's desire to meet the objective of having sharable narratives. I also noticed how the micro-stories grew out of the more granular coding process rather than replacing it. Initially fragmenting the data meant that in

reassembling it there was more depth or 'thickness' to the larger narratives and ways to see meaning and connections across them.

Further, I reflected on how the elongated and participatory nature of this enquiry process meant that it had a longitudinal and evolving impact upon the AR process described in later chapters. By involving faculty throughout the enquiry process their learning developed in parallel to the enquiry. This created an evolving context or interpretive lens for the AR cycles. For example, their involvement in the interviews directly changed their perspectives on the knowledge domains as initial interpretation and internalisation occurred in the act of listening. This sense-making (Weick, Sutcliffe and Obstfeld, 2005) continued and evolved as they participated some months later in analysis processes.

As an enquiry process designed to build faculty knowledge about transformational change, the case studies were also a rich source of insight into the CMO configurations relevant to change. Appendix F suggests a range of potential CMO configurations based upon an analysis of the micro-stories. Some examples of actions, outcomes and their inferred related mechanisms drawn from the appendix are shown in Figure 42.

ACTIVITY	MECHANISMS & OUTCOMES
Creating a vision with others	Involvement *leading to* wider commitment to the changes
Devolving leadership responsibility to others	Distancing of senior leadership *leading to* disconnected leaders
Working as a team	Mutual support *leading to* resilience
Crisis	Urgency and adaptability *leading to* new options
Acting as an honest broker	Connecting people *leading to* aligned activities
Having role neutrality (spanning a system)	Psychological safety *leading to* more honest conversations
Role modelling system leadership	Confidence building *leading to* more system leadership
Connecting changes to patient impact	Linking to shared values *leading to* enabling difficult conversations
Using informal conversations	Removing formality *leading to* creative thinking and the foundations for later formal conversations
Framing change broadly	Encompassing multiple goals *leading to* broader change commitment
Reframing situations or problems	Different thinking (perspectives) *leading to* new solutions or activities

Figure 42: Examples of CMO configurations from the longitudinal case studies

Appendix F also suggests that some fundamental patterns may exist within the configurations. For example, there was significant participant interest in the importance of building trust based relationships with those who are involved in a change process. This

appeared to be linked both to creating understanding (e.g. of stakeholder goals) and to enabling joint work. Both contributed to aligning change activities with the vision. Drawing upon the view of transformation as a cyclical engagement process (Bevan, Plsek and Winstanley, 2013) these elements are shown in a hypothesised relationships in Figure 43.

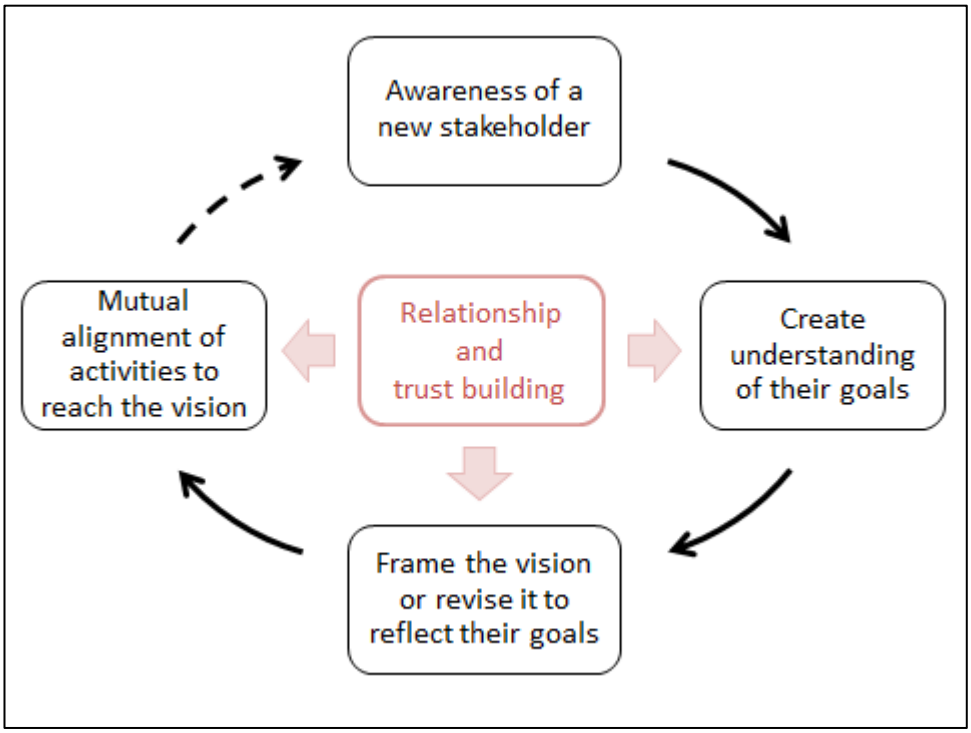


Figure 43: A cyclical view of actions based on building relationships and trust

Here building relationships and trust serves to enable a range of other actions that exist as a cyclical process. A dotted arrow is shown to suggest this cycle may continue once new stakeholders are recognised as being relevant to the achievement of the vision.

This cyclical process of alignment around a vision reflects a principle thought to underpin the functioning of complex adaptive systems (as described by Sweeney and Griffiths, 2002). In such systems, relatively stable states are believed to be created by the mutual influence exerted by multiple system agents. Figure 43, in describing a process undertaken by those leading change, can be thought of as a way of guiding how that mutual influence is shaped to create a new (desired) system state.

The case studies also prompted personal thoughts about how the 'allegiance' being described by the interviewees related to other concepts they expressed. This is illustrated in Figure 44.

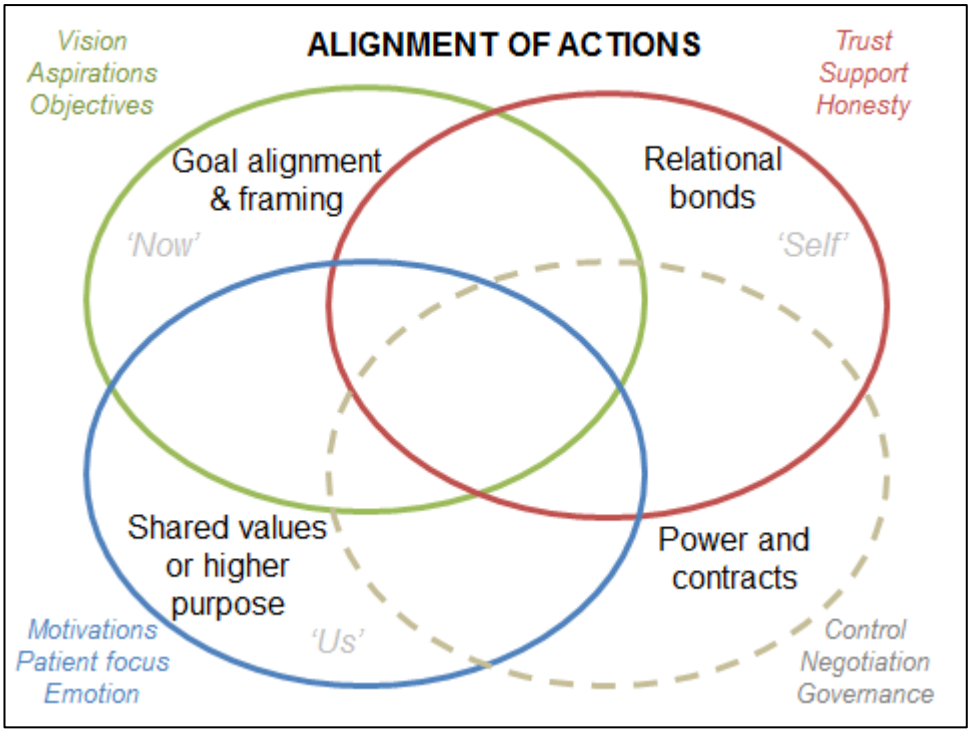


Figure 44: Aspects of allegiance identified in the longitudinal case studies

Faculty chose to call the overarching theme of the case studies 'creating allegiance to an emergent future world', suggesting this occurred through multiple ways of connecting. Figure 44 highlights four different 'allegiance' mechanisms I observed in the interviews. Top right are relational bonds, associated with terms such as trust, support and honesty. In effect these bonds ask for allegiance to a change because of allegiance to a person. Top left is the creation of aligned goals or framing a change outcome as encompassing the goals that are important to others. This creates allegiance to a common vision, objectives or aspirations. Bottom left is alignment created at the level of values or a higher purpose. This occurs at a deeper level than a vision and speaks to common motivations, emotions or in the NHS our shared mission of good patient care. The final category, bottom right, is about alignment but not allegiance (thus the dotted outline). It represents the ability of power and contractual mechanisms to align activities towards delivering a change.

In the case studies some of the interviewees identified the inadequacy of power or contracts to enforce the alignment necessary for change. They also expressed frustration at NHS processes that placed an emphasis on this approach. For them, allegiance was the alternative and was expressed as actions that combined the other three areas. For me, and for TCSL, this suggested that in supporting people to deliver transformational change we needed to focus on these three elements. This perspective was also supported in the chief executive

interviews described earlier in Section 8.2 (in particular in the views expressed in interview 'A').

In Figure 44 these elements are also labelled in grey as 'now', 'self' and 'us' to illustrate an existing connection to a TCSL knowledge domain. These terms are found in the domain of 'public narrative' that is predominantly based on the work of Marshall Ganz (2011). Public narrative, as the name implies, is a storytelling approach that is used to encourage action by others. Based upon Ganz's work with social movements it has a three component structure. This involves narratives that demonstrate personal motivations and commitment to a change (self), connect to others through values (us) and express the need to change (now). This plausible connection between the experience of the interviewees and the public narrative approach possibly explains the consistently high ratings for the public narrative modules seen in Chapter 8 as its messages resonated with the 'allegiance' practices being adopted by participants.

9 Phase I action research cycles

The previous chapter described the data generation undertaken to explore different perspectives on transformational change. As noted, these activities had a longitudinal effect on multiple TCSL programmes, shaping their evolution.

This chapter now begins to chart the course of that evolution by describing the two main AR cycles that formed Phase I of the research as shown in Figure 12.

9.1 Context and purpose

According to McNiff (2016 p.120), enquiry "always begins from where you are in the real world". When this research began in the latter half of 2016 it was a busy and challenging time for the ACT Academy. A decision had been made earlier in the year to offer a new style of TCSL programme that integrated workshops with on-line delivery elements. This 'blended' model (Boone, 2015) was believed to have the potential for 'flipped' learning (Presti, 2016), enhancing both the quality of interactions in workshops and the scope for additional content. However, as a new type of programme, the faculty was uncertain about which knowledge domains should be included and how these should be translated into the live and on-line environments. Further, despite intuitive belief in the benefits of a flipped approach, the ACT Academy did not know if such a novel programme design would be acceptable to participants or effective in supporting their skills development.

Two cohorts of the new programme were scheduled to start in November 2016 and January 2017. As with all TCSL programmes the timescales for recruitment meant that participants applied in advance of the detailed programme design. For November 2016, 14 teams (106 participants) were recruited through an NHS wide call for applications. Recruitment to the January 2017 programme was undertaken via an NHS regional body resulting in seven teams (34 participants).

This phase therefore includes two cycles.

- Cycle 1 relates to the November 2016 programme.
- Cycle 2 relates to the January 2017 programme.

These cycles took place in parallel to the activities described in Chapter 8.

- Faculty Interviews (Section 8.1) took place prior to the cycles in this phase but were not discussed with faculty until January 2017, between the two cycles described here.

- Participant case study interviews, part of a longitudinal research process (Section 8.3), were nearing completion but were awaiting their full thematic analysis at the time of the two programmes.

9.2 Cycle 1

9.2.1 Constructing

At the point where this research started in mid-2016 the faculty were beginning the design process for the November 2016 programme. Collectively we faced two main challenges. Firstly, faculty had no shared experience of programme delivery involving on-line environments so we had little awareness of how each of us saw TCSL adopting this approach. Secondly, the existing modules (and underpinning knowledge domains) had developed over time but with no recent critical evaluation by the faculty of how each contributed to TCSL. We therefore needed to collectively review the modules to determine how they might feature in the new programme and environment.

Within the faculty, programme design was customarily undertaken as a consensus based process. Therefore in my researcher role I suggested that I support the design and development of a questionnaire that would allow faculty members to openly share our views about modules in the context of the new programme. A questionnaire approach was seen as beneficial because it could support a richer discussion in a number of ways.

- It would encourage faculty to consider each module (and its associated knowledge domains) independently and systematically.

- It provided an emancipatory (equalising) mechanism as a counter to group dynamics, embodying elements of MacDonald's 'democratic evaluation' (1974) by brokering the exchange of knowledge.

- It would create time for faculty reflections when formulating personal views and when later considering the summarised views of others in advance of group discussions.

- It also provided a mechanism for faculty to broach any potentially contentious issues in a planned way.

It was agreed that I would design and administer the questionnaire and would include myself as one of the four participants. I would then produce a summary that together with the full data would be shared across the faculty in readiness for a discussion. This openly balanced the role-duality of being a faculty member with personal views on TCSL content and acting as a researcher supporting collective decision making.

9.2.2 Planning action

The questionnaire was designed to consider all 29 of the existing TCSL modules. For each it asked four questions.

- Would you include this in our core workshops? (offering a choice of 'yes', 'no' or 'desirable')
- If not in our core workshops, how would you include it?
- What are your views on the current design of this session (e.g. content, activities, length etc.)?
- If we have time, what would you like us to do to enhance this session?

These questions focused upon determining the workshop elements of the programme as these were perceived as being central to its new structure. Contextually the faculty members were also aware that their comments needed to include views on content areas that they felt should feature in the on-line environment. The questions further allowed for wider thoughts on the general design or enhancement of modules.

The questionnaire was created as an Excel spread sheet and all faculty members were made aware that their views would be shared in full and in a non-anonymised form across the faculty to maintain transparency. This supported the open inclusion of my views as a faculty member. I also agreed to produce a summary of the overall position that was later used in a discussion with faculty about the questionnaire findings. In this discussion I acted as the facilitator and captured notes that I later expanded upon in my research journal.

Overall, the questionnaire proved to be a rich source of information about faculty views. There was a high level of agreement about which modules were core to the programme with 17 having a majority view for inclusion and two with a unanimous view that they be excluded.

There were also detailed comments about most modules. Some illustrative examples are provided in Table 8.

Module	*Comments*
Exploring key concepts in transformational change	Current design • "Provides good introduction and folks seem to like the assessment against the 9 bubbles" • "The workshops needs an intro and this fits the bill" Enhancement • "Could we revisit the 9 bubbles at the end of the programme - a before and after self-assessment - and use that as a prompt for discussion within teams?" ['9 bubbles' refers to the nine factors framework described in Section 5.2]
Using qualitative intelligence	Current design • "Maybe a quick intro - highlighting the problems folks have" • "Needs some re-work - people need to see qual as possible and do-able" Enhancement • "Could we do an initial short session on qual intel and then weave it into various other sessions as a thread that runs through e.g. observation in experimentation, story-telling." • "Needs something on how to frame good 'research' questions for the qualitative methods (i.e. clarity on what they want to know not how to know it). Also a gap here on how we generate learning (e.g. PDSA, action research, double loop learning, reflection etc.)"

Table 8: Examples of responses to a questionnaire about TCSL modules (April 2016)

The subsequent discussion generated additional data as views were expanded upon, challenged and refined. The discussion also fulfilled the desired collective sense-making objective as faculty began to agree how modules would feature in the new programme.

The discussion also helped to reveal new aspects of how the faculty understood the activities and skills of transformation, becoming the stimuli for further actions.

- Historically most modules were delivered as condensed overviews followed by participant activities. Faculty recognised their emerging view that for some modules this approach was likely to be inadequate to provide the level of participant development required. Extended sessions delivered outside of TCSL workshops were suggested as a solution that was later tested with participants to gauge interest.

- Discussions highlighted a growing belief in the importance of encouraging reflective practice by participants. This was viewed as beneficial as a learning mechanism both in response to system complexity and as a vehicle for professional development. Later programme designs in Phase III went on to incorporate time for reflection and the use of a learning journal.

- Faculty started to think more critically about the role of academic theory within modules, questioning the extent to which participants needed theory in order to use the tools and techniques offered. This also reflected a shift in emphasis towards viewing TCSL as mainly supporting system change rather than participant education. The emphasis on practical application later became a design principle in Cycle 2 for the January 2017 programme (also influencing subsequent programmes).

- Discussions took place about the role played by culture in transformational change. Faculty saw this topic as a gap in our knowledge domains. However they were uncertain about whether culture should be treated as a contextual factor or as something open to change and thus a mechanism for transformation. This influenced later faculty investigations into the concept of culture (as described in Cycle 4) that eventually led to a new module.

- Some faculty members expressed the view that the content used in the 'Distributed leadership' module was inadequately developed in the literature. They felt that it failed to address how such a leadership approach can co-exist with role based hierarchies, citing the lack of detail in Kotter's work on networks and hierarchies

(2014) as an example of this confused position. Modules relating to leadership were therefore revised for the November 2016 programme to offer a more general view of leadership practice and to encourage participant discussions about the role of hierarchy.

- Emotional intelligence (Goleman, 1996) started to emerge as a skill thought to pervade multiple knowledge domains. Faculty therefore started to reframe their understanding of other modules as reflecting aspects of emotional intelligence. In subsequent programme designs 'Emotional intelligence' became a core module that was positioned as underpinning other aspects of the programme.

- Faculty expressed uncertainty about how existing programme management practices used in the NHS could be adapted to fit more complex environments. The existing module on 'Managing programmes' was felt to encompass some helpful ideas but did not provide a coherent argument for a viable alternative approach. As a result, 'Managing programmes' was removed from the programme design and subsequently revised for the programmes provided in Phase III.

As an enquiry and shared learning process the questionnaire and its resulting discussions were successful in a number of ways.

- They provided the foundation for an initial design for the November 2016 programme, helping to identify which modules would be included, how they would be revised and their positioning in the core programme and on-line environment.

- As anticipated, the process supported the sharing of a depth and breadth of viewpoints that allowed collective sense-making and action planning, also promoting wider exploration of faculty perspectives on transformation.

- The structured reporting process allowed faculty to rapidly agree common ground (e.g. the modules recommended for inclusion) and focus on differences that needed to be resolved.

- The reporting format also appeared to aid faculty in taking a more systematic view of each other's comments. Views on specific modules were discussed in the context of comments across all modules.

This process therefore provided the foundation for faculty members to undertake the detailed individual work required to develop the content for the new programme.

However, although this enquiry provided significant learning for the faculty, in retrospect it also had a major weakness that only came to light as a result of subsequent problems in the programme delivery. In focusing on the main workshop content it had been assumed that this would also allow adequate consideration of the format and role of the on-line environment. This was generally true as broad agreement was reached on how content could be separated. However, the lack of an explicit focus on the on-line aspects meant that the process failed to reveal divergent faculty assumptions. These centred upon differing perspective about how the participants would engage with the two learning environments.

These divergent assumptions are shown as two sets of competing mental models in Figure 45. These became relevant as faculty moved on from our group discussions and we individually began the detailed revision of modules to fit within the overall programme design.

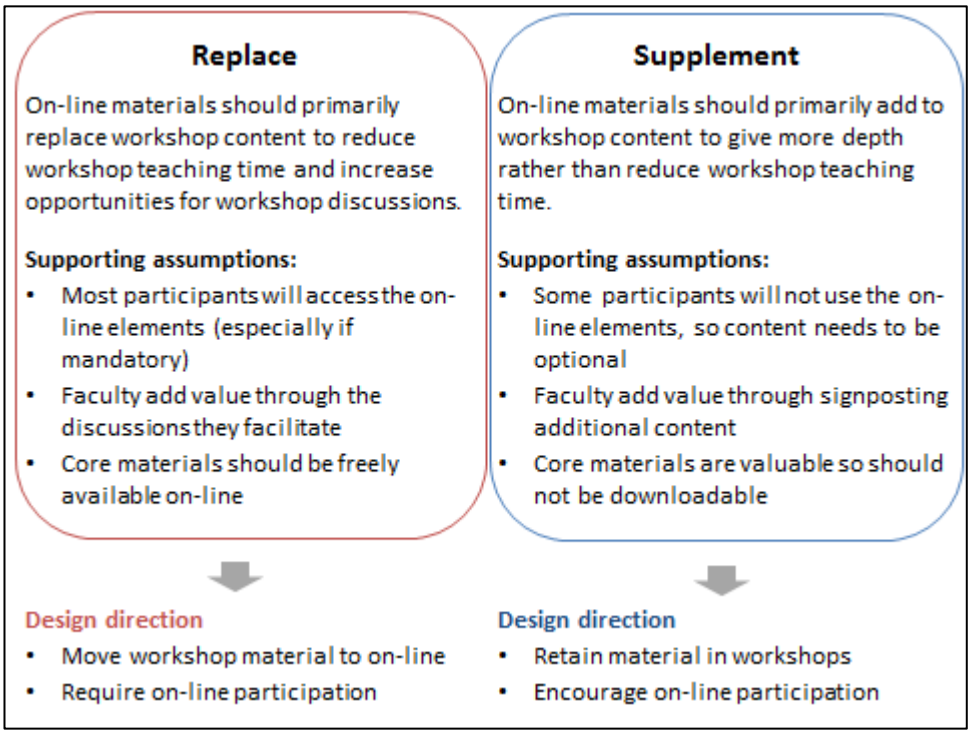


Figure 45: Competing mental models relating on the role of on-line content

In the 'replace' mindset the on-line content was seen as replacing workshop content so as to support the flipped approach to delivery and discussion. In contrast, the 'supplement' mindset viewed the on-line environment as primarily providing additional optional content.

Figure 45 also shows some of the supporting assumptions identified in faculty conversations that appeared to reinforce each position.

These mental models had not been apparent in the earlier activities in this cycle related to the questionnaire and its discussion. My reflection was that this omission was potentially an example of what Argyris (1999 p.126) describes as the "powerful defensive routines" that can come into play when problems are threatening or embarrassing to a group. These act to make problems undiscussable and "make the undiscussability undiscussable" (ibid. p. 129). In groups engaging in collaborative inquiry, Reason (1994) calls this as 'consensus collusion'.

The assumptions underpinning the positions in Figure 45 touched upon known divergent perspectives in the faculty that would potentially have been painful to expose as they represented fault-lines in the consensus model of decision making. For example, views differed about how faculty could add most value in working with systems and in whether we should fully share our underpinning TCSL materials with participants, both implicit aspects of moving to a flipped approach. Views representing these positions may have been avoided in the questionnaire responses and subsequent discussions, albeit perhaps unconsciously, to avoid revisiting old sources of conflict. I did not consider this possibility at the time and had assumed discussions were taking place in the context of the earlier agreement to pursue the flipped approach represented by the 'replace' mindset. In retrospect it appeared that we were collectively deferring or avoiding disagreements. These only became explicit (i.e. discussible) as module designs reached an advanced stage and it became clear that faculty members had reflected their personal position in Figure 45 in the modules they updated. However by this point it meant that the programme had evolved into a compromise position that favoured the 'supplement' perspective, moving away from the early aspiration of a flipped model of delivery.

This experience was a source of personal learning. It highlighted for me the risks involved in failing to adequately explore the premises underpinning actions. In future cycles (e.g. Cycle 4) this led to me placing a greater emphasis on surfacing the principles or constraints shaping TCSL programme designs within the AR process.

9.2.3 Taking action and evaluating action

The November 2016 programme was delivered to the 14 teams. Its eventual design incorporated six weeks of on-line activity that led up to two workshops. On-line activity was also planned for the four weeks between workshops and for three weeks after the second

workshop. In the on-line environment participants were introduced to various elements of the TCSL content and encouraged to engage in discussions about that content based upon stimulus questions posed by faculty. The faculty also participated in the on-line discussions responding to comments and seeking to stimulate further involvement.

In the weeks leading up to the first workshop, participant engagement with the on-line line environment was lower than expected. Whilst most participants accessed the on-line content, few chose to engage in the discussions. In addition both the content access rates and involvement in discussions reduced in the lead up to the workshops despite various faculty efforts to encourage participation. This meant that in some instances over half of the participants were not accessing the content placed on-line in advance of the related workshop modules. This eventually resulted in a decision just prior to the first workshop to reduce the emphasis on the on-line elements that were to be provided later in the programme (i.e. focusing attention on workshop delivery of TCSL content). This also effectively concluded the programme with the second workshop.

For faculty, the low engagement in the on-line elements was disappointing and hard to interpret objectively as the mental models suggested in Figure 45 also served as interpretive lenses in our discussions. For faculty who favoured the 'supplement' view it offered evidence that participants lacked the time or inclination for on-line learning, reinforcing the need to focus on workshop content. For faculty who favoured the 'replace' view it was seen as a consequence of a programme design that made the on-line elements appear optional rather than intrinsic to the programme.

This led to efforts to enquire into participant experiences of the new on-line environment and the programme as a whole.

As part of the second workshop a plenary (non-anonymised) card voting process was used to generate data from participants. This involved a series of questions as shown in Table 9, each with four voting options. At the faculty's request these questions were oriented towards exploring the on-line experiences as well as shaping future programme designs. The latter reflected pressure at the time on the ACT Academy to determine its future model for TCSL programmes.

For each question, coloured cards allowed participants to indicate preferences between options and after each vote the participants were given the chance to make brief plenary

comments. In my researcher role I developed the questions and options and agreed these with other faculty members.

Question and response options	*Results*
Should we include the virtual element of the programme? • Yes, as it currently is • Yes, but more focused on discussions • Yes, but more focused on materials (e.g. videos, papers etc.) • No, just have the workshops	The majority of views were evenly split between including virtual elements focused on materials and just having workshops.
For those of you who have not accessed <u>all</u> the on-line materials - why? • Lack of time • Didn't think they'd be useful • Technical difficulties (e.g. firewall or computer access) • Just not my preferred learning style	Most participants responded 'lack of time'. In a plenary discussion participants stated that it was easier for them to set aside whole days for off-site workshops than to carve out time in the workplace to look at on-line materials.
For our current materials, how many workshop days would you prefer? • Keep it as it is • Expand to 6 days (2 lots of 3-day workshops) • Expand to 6 days (3 lots of 2-day workshops) spread over 5 months • One day per month (over 5-6 months)	Responses were evenly divided between keeping the current workshop pattern of five days and expanding to six days delivered as 2-day workshops. In plenary discussion participants stated that 2-day workshops provided an appropriate balance between minimising travel and being able to take time away from their work duties.
Would you be interested in any of the following additional support offers? (multiple responses allowed)	The majority of participants wanted each support offer with system based facilitation received near 100% support.

• 1-day overview of transformational change (delivered in your system) • 1-day skills based workshops (e.g. a day on public narrative) delivered nationally • 1-day system based facilitated workshops (e.g. vision creation) • Access to coaches	

Table 9: Voting options used in December 2016 and a summary of responses

These responses lent weight to a 'supplement' perspective about the on-line environment with participants showing a preference for the role of the workshops as the main source of content. They further suggested that having limited time to access the on-line content was an important contextual factor. This raised doubts for faculty about the viability of the blended programme approach as a future model.

Data generation was also undertaken at the workshop module level through the use of evaluation questionnaires completed at the end of each workshop day. These questionnaires were agreed with faculty in advance of the programme and followed the method described in Section 6.1. Appendix G provides the questionnaire design (Table 24), a statistical analysis of the module ratings (Table 25 and Figure 130 to Figure 133) and a brief qualitative analysis of comments.

An example of the statistical analysis of the ratings for 'relevance of content' is shown in Figure 46. This uses a confidence interval analysis based upon the proportion of 'very good' ratings for each module. Statistically significant results when compared to the mean rating for all modules are shown as named modules.

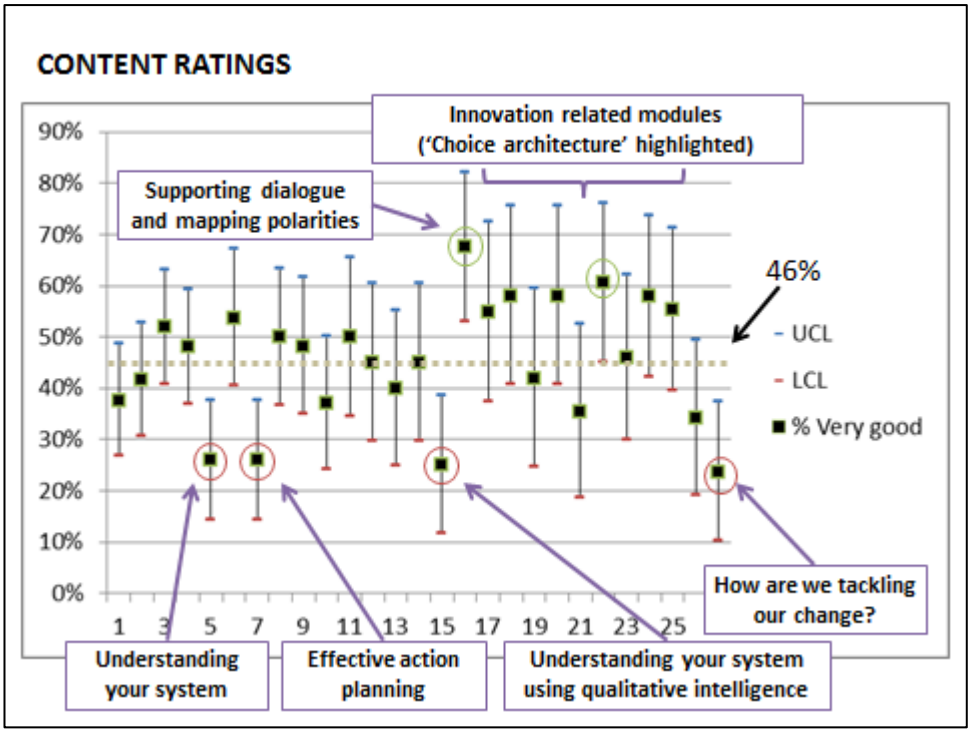


Figure 46: Content relevance analysis (November 2016 cohort)

Full questionnaire results (both quantitative and qualitative) were shared with faculty. Our discussions, incorporating our own reflections on the programme, focused upon a few key areas.

- Overall the ratings showed that participants valued the modules. Across all modules 46% of responses rated the relevance of content as 'very good' and comments were generally positive.

- Ratings showed that the 'Innovation' related modules tended to be viewed more positively than other modules (although this was not a statistically significant finding). This trend was interpreted by faculty as reflecting the coherence and practicality of this themed day, reinforcing the faculty commitment to maintaining a day on innovation in future programmes.

- The significant negative ratings across all assessed dimensions for the module on 'Understanding your system' was thought to reflect its attempt to offer a flipped design. The low numbers of participants accessing the on-line content meant that a summary had to be included in the time allocated for the workshop module. This created repetition for some participants and also reduced the time for team based discussions.

- The significant positive results for 'Supporting dialogue and mapping polarities' were hypothesised as reflecting this module's practical value as a mechanism for exploring some of the tensions (or paradoxes) of transformation facing participants.

- The significant negative ratings for the module on 'Team discussion – how are we tackling our change?' were also reflected in qualitative comments describing participants' reluctance to share new or partly formed plans with other teams. For faculty this suggested that the sharing process that formed the basis of this module occurred too early in the programme.

- Linked to the point above, comments generally demonstrated a strong participant desire for more team discussion time. This led to faculty members reviewing individual modules to identify ways to increase the discussion time within them in future programmes.

Overall, these enquiry processes suggested that participants found the workshop modules helpful but the addition of on-line elements to TCSL had not enhanced the programme for them. Faculty therefore concluded that the next team programme would not use the blended approach and would instead revert to the more traditional workshop based format.

9.3 Cycle 2

9.3.1 Constructing

The January 2017 programme was scheduled to start soon after the conclusion of the November 2016 programme. As noted above, the original plan to offer it as a blended programme was revised in light of the experiences of Cycle 1.

In advance of re-designing this programme the faculty undertook a routine review of the applications of the participating teams. For this specific programme recruitment had been undertaken by an external body and thus the faculty had not previously seen who had been accepted onto the programme. This review identified that the participants generally held more junior positions than those in prior programmes where the norm was to have a majority of director level participants. Some faculty members were concerned that this lower level of authority would reduce participant ability to implement the TCSL content. In addition, concerns were raised that some of the team projects were less complex than those

usually brought to TCSL and therefore more suitable for basic service improvement methods. In combination these two factors indicated a perceived mismatch between the usual content of TCSL programmes and the needs of the teams who would be attending. This led some faculty to suggest that the programme be cancelled.

However, these concerns were not shared by all faculty members and some felt that a TCSL programme would still be relevant to these teams. This disagreement suggested the existence of differing views about the role of participant authority and what is meant by project complexity. More generally it suggested differences in how we were applying our criteria for suitability of teams and projects for our programmes.

To explore these differences I agreed in my researcher role to facilitate a discussion about how we make our judgements on team and project suitability for TCSL. Faculty members suggested that this be expanded to encompass some of the challenges we have encountered in relation to participation in previous programmes. Specifically this included a perception that some participants had a low commitment to the programme (as demonstrated by low engagement in the workshops and poor attendance). These additional issues were viewed as related aspects of team and project suitability.

I therefore created a structure for a faculty discussion based upon four questions. These were framed to open up enquiry whilst maintaining an action orientation.

- How can we ensure participant commitment to the programme?
- How can we ensure applications are based upon transformational change rather than service improvement?
- How can we get the right range and seniority of participants?
- How can we reduce withdrawals or variable attendance in the programme?

In my dual insider-researcher role I acted as both a participant and facilitator in this conversation. To capture data I made notes during the conversation and added my reflections to my research journal immediately after.

Initially discussions assumed that some issues were due to communication problems. Faculty highlighted the importance of ensuring participants received appropriate information about the programme and suggested some alterations to pre-programme information. However, discussions soon started to highlight different faculty perspectives that were influencing our

assessment of applications. For example, we realised that views on what constitutes a 'transformation' differed across the faculty.

- Some faculty members were implicitly adopting the 'adaptive challenges' view of Heifetz, Grashow and Linsky (2009) to define transformation. This literature suggests that the attributes generally associated with complexity can be present in even relatively small scale change. When assessing projects as potentially transformational these faculty members tended to ignore the scale or breadth of change involved and tended to focus on the likelihood that the change would encounter significant resistance or need to encompass multiple goals.

- In contrast, other faculty members explicitly saw scale and breadth as important. For them a main marker of transformation was whether the change activities would cross multiple organisational boundaries. They saw projects based within single organisations as 'less complex' and thus less appropriate for TCSL.

- Yet another perspective offered was to view 'transformation' through its contrast with 'service improvement'. Where faculty perceived a project as potentially proceeding through incremental service changes, or through a managed redesign approach, it was viewed as not being transformational and therefore unsuitable for TCSL programmes. However, this perception was recognised to be subjective since it was based upon each faculty member's prior experiences with similar projects and their interpretation of the limited information contained in applications.

Collectively these different views on transformation reinforced the need to develop a better shared perspective on how faculty should define transformation. This became the subject of the cycle described in Section 12.3.

The faculty discussion also explored assumptions about the need for participant seniority. Some faculty assumed that seniority was necessary as it provided a source of power or offered a helpful system-wide perspective. Others adopted a pragmatic stance noting that junior people are often asked to lead major changes and have to find their own ways to be influential. This view echoed some of the learning from the longitudinal case studies in Section 8.3 where the 'brokering' role in change leadership was identified. Some faculty members also questioned the implicit assumption that seniority conveyed a more valid view of the context for a transformation rather than simply a different view. Eventually the conversation led to a middle ground position that suggested seniority (and its associated

power and perspective) were helpful in transformational change but not essential. For faculty this also saw the start of a softening of our stance towards rejecting teams who had less senior participants.

The discussion further revealed a previously unarticulated concern about the need for caution when working with newly formed teams. Some faculty noted that in prior programmes such teams appeared less committed to using the TCSL materials in workshop activities and tended to quickly revert to general discussions about their systems. This was hypothesised as reflecting team development processes as participants went through the team stages described by Tuckman (1965). This prompted an increased focus in later programmes on early activities that would aid rapid team development.

Whilst much of this broad discussion supported the longer term evolution of TCSL, its relevance to the January 2017 programme was that it gave the faculty an opportunity to explore some of their fears and differing views about supporting this new cohort. By considering past experiences and contrasting our different perspectives we were able to see this cohort in a new way, one where TCSL could be relevant to them despite their differences from other cohorts. The initial reaction that we might need to cancel the January 2017 programme gave way to a suggestion that we radically alter its design as an experiment in how to meet the needs of this different audience.

9.3.2 Planning action

It was therefore determined that the new design for January 2017 would be based upon a series of principles reflecting the learning from the previous cycle and the discussions above. These included

- movement away from on-line elements to focus on workshop delivery,
- avoiding those modules viewed by faculty as predominantly relevant to highly complex systems,
- reducing our emphasis on (or assumption of) positional power,
- focusing on practical application over theory, and
- responding where possible to the November 2016 evaluation feedback (e.g. in our choice of modules and in seeking to increase time for team discussions).

A pragmatic choice was also made to reduce the length of the programme to become a single 2-day workshop (i.e. with fewer modules than the previous programme). This limited the amount of ACT Academy resources devoted to what was recognised as an experimental programme.

In my faculty role I developed an initial programme design based upon the principles above which used the learning from the module questionnaire process introduced in Cycle 1. The design was subsequently agreed by the wider faculty.

9.3.3 Taking action and evaluating action

The January 2017 programme was delivered to seven teams. Its design incorporated 13 modules delivered over the two days.

Participants' experiences were explored using workshop questionnaires. These followed the processes described in Section 6.1 and results are summarised in Appendix G (with statistical data in Table 28 and Figure 134 to Figure 137). An example of the statistical analysis of the ratings for relevance of content is shown in Figure 47.

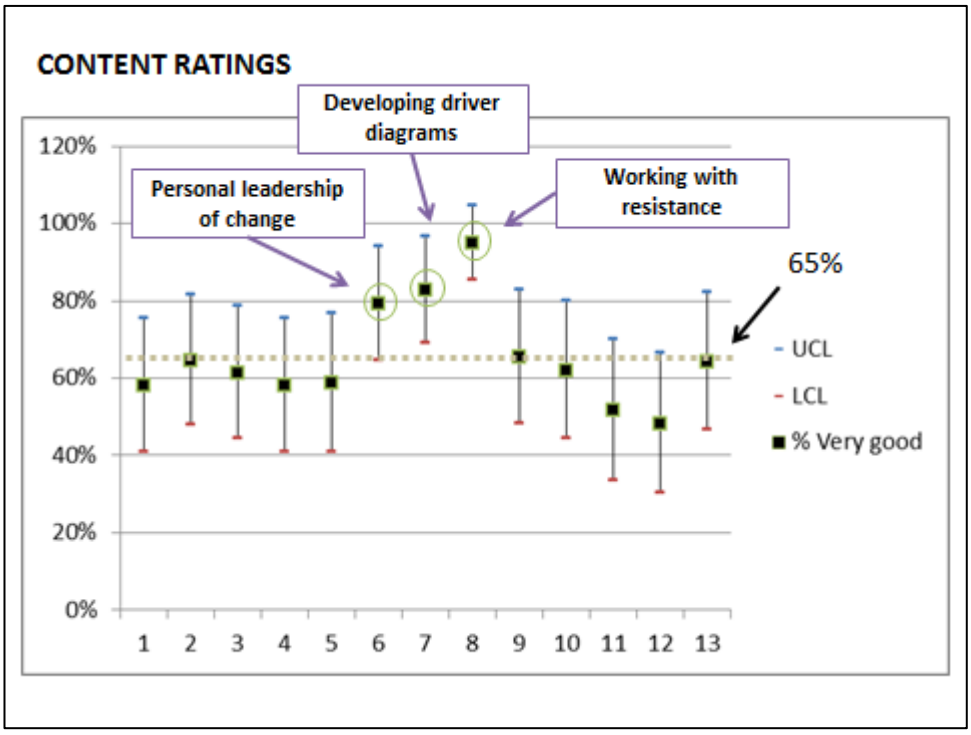


Figure 47: Content relevance analysis (January 2017 cohort)

Faculty were provided with all of the questionnaire data as well as a summary. Subsequent discussions of this data and the faculty experience of the workshop highlighted a number of findings.

- Overall the workshop was well received. For example Figure 47 shows a mean 'very good' content rating of 65% which compares favourably to the mean rating of 46% in the November 2016 cohort (Figure 46). This indicated that participants were gaining value from the programme modules despite faculty perceptions of participant and project differences from earlier cohorts.

- The module on 'Developing driver diagrams' rated significantly highly on all dimensions (Table 28 Appendix G). Faculty saw this as reflecting the more practical orientation of this module and its potential for application in both complex and non-complex situations.

- A revised leadership module combining aspects of leadership practice and emotional intelligence was positively received by participants, rating significantly highly for its content. For faculty this further supported the central role of emotional intelligence suggested in Cycle 1.

- Qualitative questionnaire results indicated that participants highly valued the time available in the workshops to engage with colleagues and to get to know them better (see Figure 138 Appendix G). This reinforced for faculty the inherent value of allocating time to team activities and validated efforts to create more activity time as identified in the previous cycle.

- Qualitative results further suggested that participants valued the practicality of the tools and techniques provided (Figure 138 Appendix G). This helped to validate faculty efforts to make this programme more practically orientated than the November 2016 programme.

Overall the questionnaire results reinforced the faculty view that the January 2017 programme had been a success. Findings demonstrated that this cohort, despite its differences from other cohorts, had benefitted from TCSL content. It also indicated the viability of a shorter programme format. This proved influential in Phase II in the development of what became called the 'Insights' programme.

9.4 Reflections on this phase

This phase of the research incorporated two sequential AR cycles linked to programme design and evaluation across two TCSL programmes. Learning from the first cycle led to a fundamental reshaping of the plans for the second cycle. There were also indications that the parallel enquiry processes of Chapter 8 were helping to influence faculty thinking. For example the longitudinal case studies (Section 8.3) had shown how less senior participants had found ways to lead change, influencing faculty discussions about the role of seniority in Cycle 2.

Within this phase the enquiries within the AR cycles were used flexibly to support faculty activities. As examples, a questionnaire approach was used to prioritise knowledge domains for the November 2016 programme and conversations were supported in response to concerns about the characteristics of teams recruited to the January 2017 programme. Also, across both cycles participant questionnaires acted as a valuable source of data for faculty discussions allowing an integration of participant and faculty experiences.

Whilst my research approach in this phase was generally effective in supporting the faculty through the AR cycles, it failed to recognise a collective defensive routine operating across the faculty. This had masked underlying differences about the role of on-line environments as replacing or supplementing workshop content. This ultimately weakened the design and implementation of the November 2016 programme. This heightened my awareness of 'undiscussability' Argyris (1999) and the need to pay more attention to identifying the 'shadow side' processes (Egan, 1994) influencing programme design. It also led in subsequent cycles to a greater emphasis on the shared identification of the principles that would be used to guide programme designs.

Unexpectedly, these cycles also helped to surface faculty premises relating to their interpretation of complexity and the need for authority based power in change leaders. Whilst surfacing these views directly influenced the design of the January 2017 programme they also ultimately led to a future cycle (Section 12.3) where the attributes of transformation were explored in order to create a shared faculty definition of transformational change.

10 Phase II action research cycles

10.1 Context and purpose

January 2017 was a key month in this research. The results of the faculty interviews were discussed (Section 8.1); the January 2017 programme was delivered and evaluated (Cycle 2); and the ACT Academy met to plan its future programme delivery.

A range of contextual factors were recognised as influencing the plans for future TCSL programmes.

- The experience of creating the revised programme for January 2017 had bolstered faculty confidence that condensed programmes based on key TCSL materials were feasible.

- External to the team there were increasing pressures to offer a TCSL programme that could be used for individual rather than team development, including a request to provide capability development for our colleagues in NHS Improvement.

- Organisationally there was an increasing focus on supporting the leaders in STPs (Sustainability and Transformation Partnerships). These senior people were viewed as unlikely to attend long project specific support offers like the team based TCSL programme.

- Faculty started to see benefits in having a programme that could be deployed quickly as demands for support arose, offering a more rapid response than traditional TCSL team programmes.

- Recruitment to team TCSL programmes had historically proved problematic. It was suggested that some form of introductory programme was needed that could encourage later participation in the team programme.

As will be discussed at the start of Cycle 3, the planning process led to the decision to create a shorter TCSL programme that would sit alongside longer team based offers. Christened 'Insights', this two-day workshop would be a flexible offer that could support individual development or, where necessary, act as an alternative to the longer team based programmes.

Like earlier programmes, recruitment to Insights preceded its detailed design and two cohorts were scheduled in 2017. The first in May responded to the request for internal capability building for NHS Improvement colleagues and the second in June targeted senior leaders in STPs. These programmes eventually attracted 54 and 66 participants respectively.

This phase therefore contains a single main cycle relating to both the May and June 2017 Insights programmes. Within this cycle a further AR cycle was undertaken to refine the nine factors framework through the development of a model of transformational change. This is described separately in Section 12.1.

Activities in this phase were also influenced by other contemporaneous enquiry processes. The faculty interviews (Section 8.1) were discussed just prior to the January planning meeting and thus formed part of its context. The longitudinal case studies (Section 8.3) had moved into their theming stage in the run up to the Insights programmes and thus provided a frame for interpreting some of the learning from those programmes.

10.2 Cycle 3

10.2.1 Constructing

A major meeting of the faculty and wider ACT Academy members was scheduled for January 2017 in order to plan the Academy's support offers for the next two years. To aid discussions about TCSL programmes I undertook to share some of the data generated from earlier cycles, using this to highlight emerging themes in faculty thinking and to suggest potential implications for TCSL.

In readiness for the meeting I used my research journal and data from other cycles to create a series of slides that summarised what I had heard as team aspirations for our programmes and factors that might influence the design of programmes. The slides also reminded the group to some of the faculty conversations started in the previous phase, providing opportunities to discuss the attempt at a blended programme and revisit the debates about project complexity and the role of participant seniority in TCSL. I also used the latter issue to demonstrate how this could have a direct impact upon the types of delivery options we might choose to pursue, deliberately encouraging the group to think broadly about what TCSL could look like going forward.

Using slides in this way was intended to act as a mechanism for managing my role duality as a researcher and faculty member. As visible statements, the slides allowed me to present data and hypotheses from a researcher perspective, separating these from the resulting discussions that I could engage in as a faculty member.

My reflections on these discussions were that overall the slides served their intended purpose of promoting a broad exploration of potential future directions for TCSL. Discussions ranged across the areas presented, typically echoing patterns of conversations experienced in earlier cycles. However, the group also quickly recognised that their ability to make decisions was hampered by a lack of certainty about the future corporate expectations of the ACT Academy. This meant that, whilst much of the learning or choices presented to faculty were relevant, an uncertain future made it difficult to select between alternative actions. We therefore adopted a strategy that sought to create future flexibility whilst responding to what we did know about the emerging context for our work. This ultimately led to three agreed areas of action.

- We would develop a new shorter programme (entitled 'Insights'), modelled on the January 2017 team programme, designed to be suitable for individuals or teams. This responded to the context outlined at the start of this chapter.

- We would modify our existing team programme (as will be described in Phase III) to base it upon six days of workshop delivery. This reflected the success of the workshop based format in Phase I whilst responding to a faculty desire to add content (Section 8.1) and a participant desire for longer team based activities (Cycle 1).

- One of the cohorts for this modified team programme would be used to respond to the faculty desire for closer working with participants (Section 8.1). This would provide opportunities for faculty professional development.

These action areas provided enough of a framework to map out our programme offers going forward whilst retaining flexibility in the audience and detailed design for these offers. Soon after this agreement the Insights programme was offered to the NHS Improvement and STPs groups for delivery in May and June 2017 respectively.

10.2.2 Planning action

Following this meeting my immediate task was to lead the faculty's design of the new Insights programme. Due to the very recent delivery of the two-day January 2017 team programme, the faculty had already begun to use this as a 'boundary object' (Star and Griesemer, 1989) to represent our thoughts on Insights. I therefore built upon this to use the January 2017 design as a starting point for a series of discussions with faulty to generate views about the final design of Insights. The module review process undertaken in Cycle 1 and the success of the January 2017 programme meant that the faculty rapidly settled upon a design that adopted most of the modules used in January 2017.

More importantly however, in this process some faculty members also began to suggest a need to emphasise greater connections between the TCSL knowledge domains and therefore between the modules included in Insights. They offered the view that in our previous programmes there was a risk that participants would have failed to see how actions developed in different modules might conflict with or mutually reinforce each other. Participant action planning therefore started to be framed as a process of pattern formation occurring across TCSL modules where mutual reinforcement would ultimately lead to transformational change.

This shift in thinking potentially had its roots in earlier enquiry and knowledge building processes.

- It reflected a message faculty had heard in the participant case studies (Section 8.3). In these, participants had not singled out the impact of individual modules but had instead described the importance of embedding TCSL content as an integrated whole into their professional practice. This highlighted the need to plan actions across module boundaries.

- Theories or concepts relating to complexity had been shared with faculty throughout this research. These emphasised how the properties of complex systems emerged as a result of connections between system elements (e.g. as described by Sweeney and Griffiths, 2002). It was therefore possible that faculty were beginning to view modules as interacting system elements.

- The action and enquiry in Cycle 1 and the faculty interviews (Section 8.1) had identified that the faculty were starting to recognise common threads across the

knowledge domains (e.g. emotional intelligence). Thus the idea of connections between modules had started to take form.

This concept of mutually reinforcing patterns of action was taken a step further in faculty discussions to suggest that we should encourage participants to develop their own models of transformational change based upon the TCSL content. These models, if internally consistent and reflecting TCSL, could then act as a guide to aligning actions. This suggestion reflected a finding in the work of Boaden, Harvey, Moxham and Proudlove (2008). They had reviewed the change models being used in the NHS and concluded that the consistent use of a model to guide change practice was more important than the details of the model itself. In the absence of a dominant or agreed model in the academic literature for transformational change, encouragement for participants to create their own models therefore became a mechanism to create this consistency.

Faculty therefore believed that the participants' alignment of actions across modules could be supported both by our own efforts to align module content and participants' efforts to create their own change models based on that content.

To achieve our own alignment the faculty suggested that the existing nine factors framework could act as an aligning mechanism. As described in Section 5.2 the nine factors represented the faculty's view on the key areas of action required in transformational change. They felt that this framework could be emphasised in programmes and positioned as a comprehensive set of action areas. Participants would then be encouraged to ensure that any action plans they developed were considered for their impact across all of the factors. In this way the framework would be a reference point for participants in aligning their actions and for faculty in aligning content across modules.

However, this extended use of the nine factors framework presented a problem for faculty. The framework had emerged historically to represent faculty views. It therefore had no underpinning academic foundation or model that justified the uniqueness of each factor. For the same reason, it could not claim to be a comprehensive framework. So, although it had significant face validity derived through its use in TCSL programmes, uncertainty existed about whether it was suitable to underpin the TCSL modules. Addressing this problem became the subject of the AR cycle described in detail in Section 12.1. In this cycle a justification for the framework was developed through creating my own personal model of transformational change. This subsequently led to a small modification of the nine factors

framework that was adopted into Insights and later TCSL programmes (with its uses extended significantly in Cycle 5).

To further reinforce connections between modules a few of the modules selected for Insights were also slightly updated so as to highlight linkages between the modules. In addition to encourage participants to create their own change models a new module was introduced entitled 'How will you tackle your change?. This encouraged participants to define their own change models or principles and to use these to guide their choice of actions both within the TCSL programme and outside of it.

10.2.3 Taking action and evaluating

The new Insights programme was tested with the May and June 2017 cohorts.

As the May cohort was comprised of NHS Improvement colleagues this meant that participants were predominantly in roles that supported others leading change rather than leading change themselves. Faculty decided that the Insights design, created primarily for those leading changes, could be retained but with small adjustments made to the activities undertaken by the participants during the modules.

The May cohort included 54 participants.

Workshop evaluation followed the process described in Section 6.1 using the questionnaire design shown in Appendix G (Table 29). In addition, a new process was introduced whereby a non-faculty member of the ACT Academy with research experience would conduct short ad hoc interviews during workshop breaks. These interviews were intended to generate data that explored immediate reactions to the programme which could then be fed back to the faculty. In my researcher role I influenced the areas that would be covered in these brief interviews to reflect the faculty's interest in the programme design and module content.

Following the workshop the questionnaire results and a report on the qualitative findings from the interviews formed the basis for a series of faculty conversations. Data from both is summarised in Appendix G (e.g. Table 30).

Data indicated that participants were very positive about the programme. For this cohort a simplified three-point rating scale was used in order to support internal reporting requirements. It was found that the average 'very good' rating for the usefulness of module content was 79%. This high percentage was viewed as an encouraging endorsement from experienced peers.

The statistical analysis at a module level is shown in Figure 48.

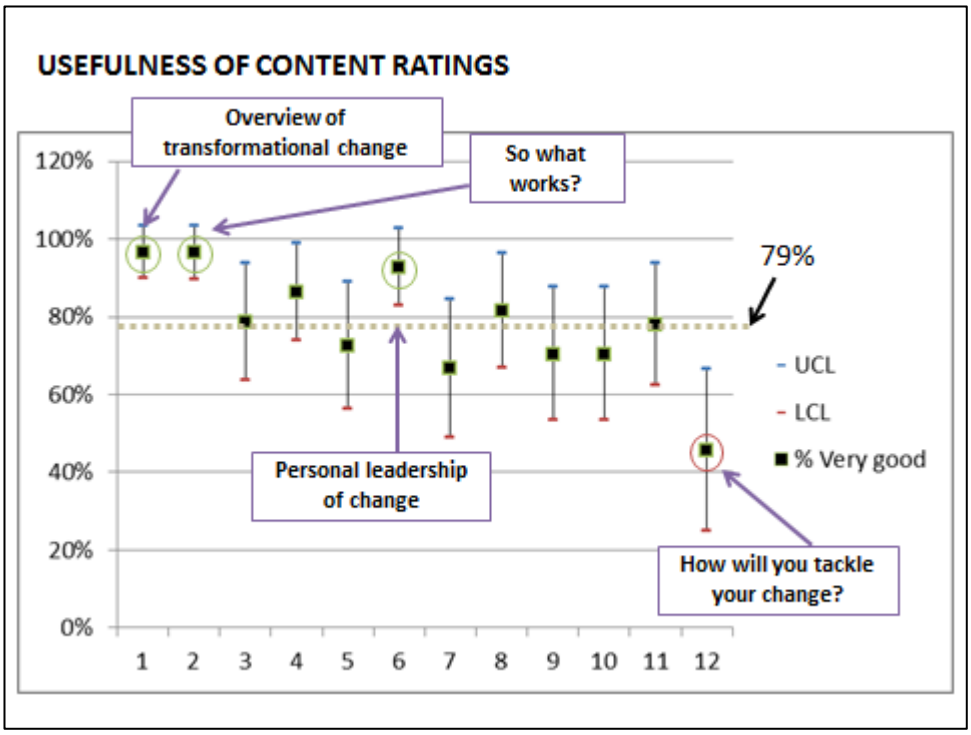


Figure 48: Content usefulness analysis (May 2017 cohort)

For faculty these results reflected positively on our efforts to offer a more integrated perspective across the programme content. The three modules with significant positive ratings were all modules that had been redesigned to emphasise links across the programme's content, suggesting that participants found the integrated view helpful.

The single statistically negative result related to the new module introduced to encourage participants to develop their own model of change to use in their projects. For this cohort the focus of the activity had been adapted slightly as the participant roles meant that they did not necessarily have live projects. Qualitative feedback suggested that this adaptation led to the module activity feeling less grounded in practice due to the absence of projects. Its low rating was therefore not a cause of concern for later programmes.

The questionnaire generated more detailed comments than in earlier programmes. The 263 comments received were reviewed by faculty and triangulated with the views gathered by the non-faculty observer. Overall these did not provide any consistent indications that specific modules needed to be altered. Participants were predominantly positive about the modules and noted that the content often acted as a reminder of relevant theories or helped to reinforce existing viewpoints gained through their professional practice.

The qualitative data also suggested a number of mechanisms that supported participant intentions to use the module content. These included

- how the flow of content and its coherence as a whole made the programme more convincing;
- positive perceptions about the expertise of faculty, derived from the faculty's confidence, presentation skills and ability to respond to questions;
- motivational aspects created by experiencing the materials (i.e. feeling energised to try new things); and
- having practical tools that they could use in systems.

Again these views served to validate the faculty's movement towards emphasising the totality of module content. They also created new faculty awareness about the importance of our credibility and reinforced the need to maintain a practical focus to our programmes.

The main negative finding was that some participants felt that the programme was too intense with too much content for a two-day programme. This criticism aligned with faculty perceptions. We had observed the cohort engaging well with the materials but the high volume of content had limited the time for participant discussions with their peers.

As a result of faculty discussions of all the feedback it was decided that no major changes were needed for the June 2017 Insights programme. It was however agreed that each module's content would be reviewed to try and increase activity time. This led to minor alterations to some modules.

The second Insights programme was delivered in June 2017 to 66 participants from STPs.

Workshop evaluation processes were also kept broadly the same as the previous Insights programme. The workshop evaluation questionnaire was retained but now with an expanded five point rating scale. The involvement of an ACT academy non-faculty member in ad hoc interviews was also continued.

In my researcher role I facilitated a meeting of the faculty (together with the non-faculty interviewer) to discuss the learning from this programme. Those attending were provided with a summary of the questionnaire results, both quantitative and qualitative (summarised in Appendix G).

The STP participants' views of the usefulness of module content were very positive as shown in Figure 49. For this overall content rating, 61% of respondents described modules as 'very good'. Statistically only one module could be identified as falling below the mean. This lower rating for a module based on the concept of 'safe to fail experiments' (Snowden and Boone, 2007) was suggested by faculty as arising for a range of reasons. As a short session, participants had only a limited period of time to consider potential experiments. Also it was thought that the concept of allowable failure would have challenged local cultural norms for some participants and may therefore have encountered resistance in some teams.

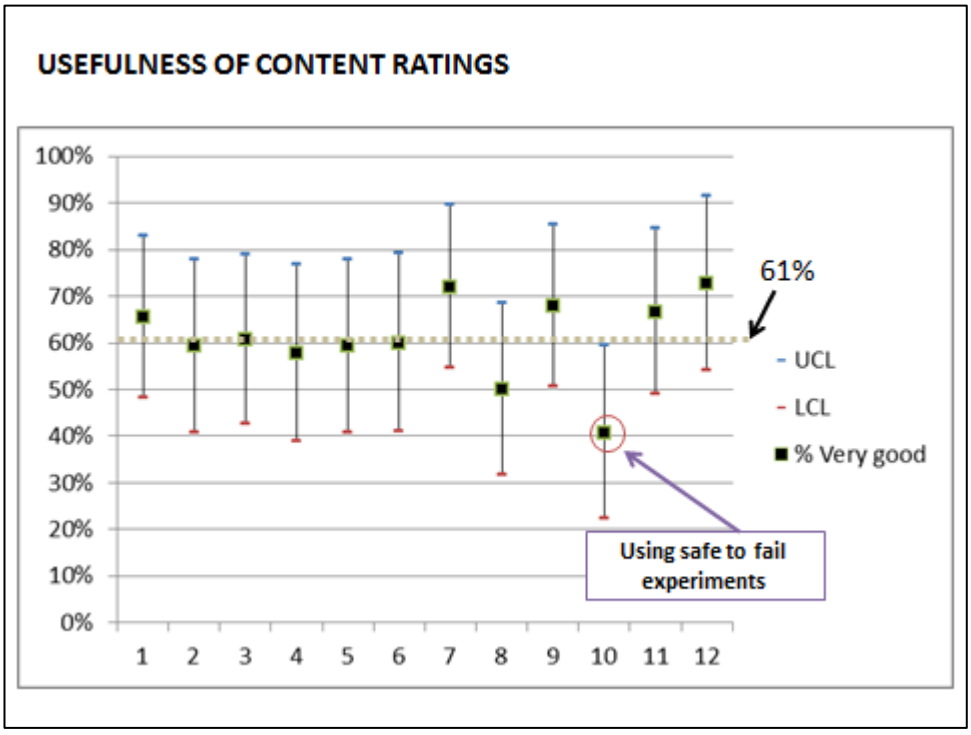


Figure 49: Content usefulness analysis (June 2017 cohort)

The questionnaires resulted in 201 module related comments. As in the previous programme a review of comments at the module level showed no significant themes that warranted module level changes. Modules were generally described positively with participants noting their practicality and relevance to their change work. Across the modules and programme as a whole there was also appreciation of the breadth and depth of content with participants also commenting on how the programme had provided them with valuable time to think. For faculty this reinforced the view that within TCSL programmes the workshop environment, coupled with the varied lenses of TCSL content, provided a mechanism that supported learning and action.

Overall the findings suggested to faculty that the programme had broadly met its aim of providing a coherent breadth of content that also allowed sufficient activity time for application.

From the data generated the faculty also noted that in this STP group there was a strong desire to explore their current NHS context. For example, in the ad hoc workshop interviews the participants typically gravitated towards talking about the mounting challenges they faced as newly formed STPs (often to the exclusion of giving the requested feedback on TCSL content). Similarly, during some workshop activities the faculty observed table groups digressing into conversations about unrelated STP issues. There was also a desire expressed through the workshop questionnaires for more examples of how the NHS was using the TCSL content.

Faculty hypothesised that these observations reflected the current challenging context facing those in STPs. As a relatively new structural alteration to decision making processes in the NHS, STPs represented an attempt to formalise change leadership across large geographical patches. For those in STPs this meant a shift in role from overseeing organisational change to working collaboratively in order to achieve larger system change. In its timing and audience the Insights programme therefore provided a sense-making opportunity for those present.

This focus also suggested a reason why questionnaire comments showed a heightened appreciation of those modules orientated towards complexity (e.g. the 'Simple rules' module based on Zimmerman, Lindburg and Plsek, 1998). Such modules may have resonated with participants as they reflected on the uncertainties and ambiguities they were expected to manage within their new STP work.

For faculty, this participant preoccupation with STP challenges was also recognised as having negative aspects. Whilst conversations between participants provided some sense-making of the challenges, they often appeared predominantly cathartic without leading to action. They therefore served to de-stress or limit feelings of tension in similar ways to the group processes observed by Fenlason and Beehr (1994). However, in failing to move to action the participants left the tensions they faced as unresolved. Faculty therefore suggested that in future programmes we should do more to link discussion processes to action planning. In Phase III this led to the development of an action planning guidance template used as a

physical reminder of the need for action oriented conversations. This was also reinforced in that phase through the introduction of dedicated action planning periods.

10.3 Reflections on this phase

This phase was based upon a single main AR cycle which built upon previous action and enquiry to create, deliver and evaluate two Insights programmes. The cycle occurred contemporaneously with other knowledge building cycles undertaken in this research (Chapter 8) and incorporated an AR cycle leading to a revision of the nine factors framework (Section 12.1) that was incorporated into the Insights programmes.

In many ways this phase was less challenging than the first. The Insights programmes emerged relatively painlessly as a reincarnation of the January 2017 programme, building upon the experiences of Phase I. The successful piloting of the first Insights programme with an experienced NHS Improvement audience led to it continuing without any major redesign to be delivered to an STP cohort. This too was judged by faculty to have been successful.

In developing and delivering these programmes there was new learning for the faculty. We experienced how our own uncertainty about the future led to us adopting broad programme designs that did not move far from the status quo in order to allow future flexibility. In doing this we mirrored how our participants experience uncertainty, staying in the 'comfort zone' described by Heifetz, Grashow and Linsky (2009) without the pressure or direction required for major change. We also saw again how 'time' played a part as a mechanism adding value to our programmes. Further, we saw participants use our programmes in new ways, providing a cathartic release from the tensions experienced as new STPs.

Although our choice of modules changed little from the January 2017 programme, the faculty did begin to adopt new approaches to support participants in choosing and aligning their actions, viewing alignment as an important enabler of transformation. These two mechanisms are illustrated in Figure 50 (which is expanded upon in the next phase).

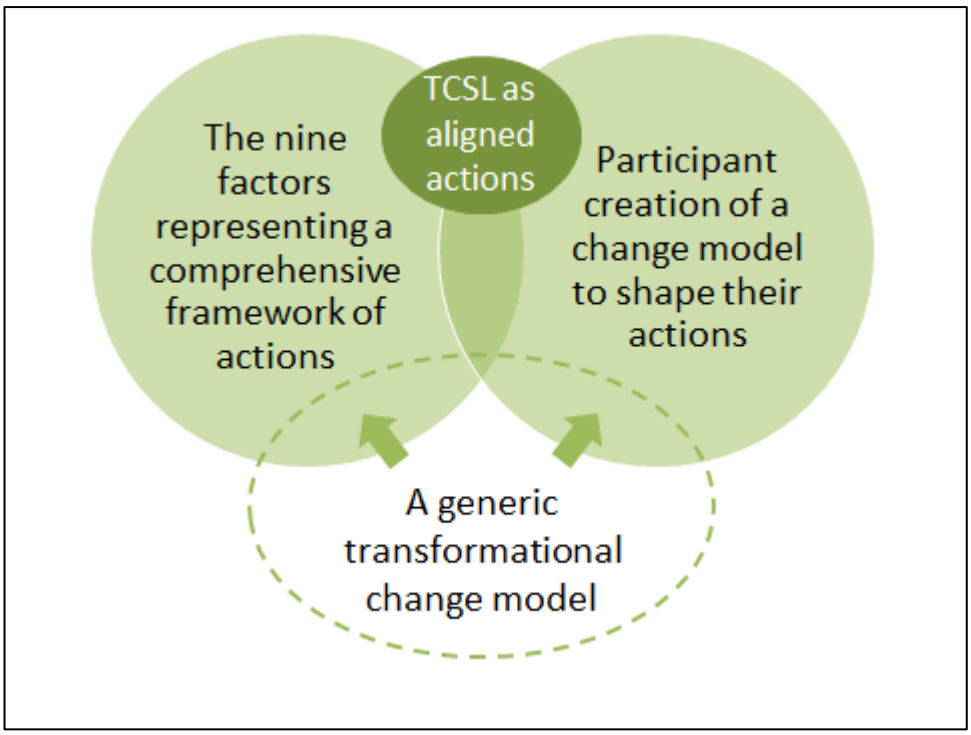


Figure 50: Two mechanisms for supporting action choices

In the mechanisms shown in Figure 50 the faculty were now emphasising that TCSL programmes were more than a collection of modules, the sum being greater than the parts. This shift in thinking appeared to emerge from a combination of increased appreciation of how participants experienced TCSL content (Section 8.3) and growing awareness of the importance of connectedness across systems in the complexity literature. Thus, the complexity orientation of TCSL programmes was also beginning to be reflected in their design.

Figure 50 also shows how the smaller AR cycle of Section 12.1 played its part in this phase. Through developing a model of transformational change to underpin the nine factors framework, the activities of Section 12.1 also served to underpin the more specific models being created by TCSL participants to shape their change practice.

As a research process this phase saw a widening of our approach to generating data from TCSL participants. Short interviews (and the interpretation of these by an independent non-faculty member) became part of the evaluation process, responding to the limitations of questionnaires in exploring participant perspectives. The questionnaires themselves continued to be a useful source of data, helping to challenge faculty premises and prompting new hypotheses about programme mechanisms and the influence of the participants' contexts.

11 Phase III action research cycles

11.1 Context and purpose

In January 2017 a decision had been made to offer two team programmes later in the year. These would each be comprised of three workshops (labelled A, B and C respectively), with each workshop lasting two days. Since it was assumed that the content for both programmes would be the same they were scheduled to run in parallel, with their respective workshops separated by only 1-2 weeks. Both programmes had approximately 5-6 months between their first and last workshops.

The first of these programmes was scheduled to start in late September 2017. It was decided that this would be open to any type of transformational change project. A recruitment process eventually led to 11 teams (67 participants) being accepted onto the programme. In early 2017 the ACT Academy was also approached by a national group leading work on urgent and emergency care (UEC) services. They requested a TCSL programme for UEC systems and it was agreed that the second planned programme, scheduled to start in early October 2018, would be allocated to UEC teams. This eventually led to the recruitment of eight teams (49 participants).

In line with other plans identified in January 2017 the programme set aside for UEC systems was also designated as one where faculty members would attempt to build closer working relationships with participating teams. This meant that each team was allocated a faculty member who would make contact with the team leads and provide further support to the team during workshops if requested.

During the recruitment processes for both of these programmes a decision was made to offer a third team programme to start immediately after their conclusion in February 2018. It was planned to follow the same three workshop format and like the September 2017 programme it would be open to any form of transformational change project. Teams were recruited during the delivery of the earlier programmes, eventually resulting in 11 teams (62 participants).

In January 2017 the discussion of the experiences described in Cycle 1 had led to the decision to limit all of these programmes to workshop based support without any on-line elements. It had also been decided to increase the workshop time allocation from five to six days. This was intended to allow scope for more content and longer team based activities, the latter

reflecting feedback from earlier programmes. The decision to deliver the programmes over 4-5 month periods resulted from a combination of scheduling challenges faced by the wider ACT Academy and a desire to allow time between workshops for participants to progress with their change projects.

At the point of scheduling the workshops it was recognised that the new six day format would require a new overall programme design to reflect its longer length. It was anticipated by the faculty that this could incorporate learning from the earlier team and Insights programmes.

This phase therefore included two cycles.

- Cycle 4 relates to the parallel September and October 2017 programmes.
- Cycle 5 relates to the February 2018 programme.

As with earlier cycles these took place alongside the enquiry processes of Chapter 8. The analysis of the longitudinal case study data (Section 8.3) was completed and findings incorporated into the TCSL programmes in Cycle 4 alongside themes from the chief executive interviews (Section 8.2). The themes from both enquiries were also discussed in depth with faculty during the period covered by Cycle 5.

11.2 Cycle 4

11.2.1 Constructing

The increase in the length of the team programmes to six days provided significant flexibility for the faculty to alter or add to the range of content included. Also, there was a desire amongst faculty to build on the process started in Insights where module content had been aligned across the programme and participants had been encouraged to develop their own models of change. These new design considerations had reflected a belief that participant actions developed throughout TCSL programmes had to be mutually reinforcing and aligned with their own coherent approach to change.

The new team programmes therefore required the faculty to consider how best to use the flexibility afforded by the increased days as well as how to continue the alignment and change model focus introduced in the much shorter Insights programmes.

Earlier work formed the context for this design process. Faculty had already shared views on our range of modules in Cycle 1. We had also started to create connections between modules in Insights and begun using the nine factors framework as a more central guiding framework underpinning the programme's pedagogical approach. It was therefore agreed that I would build upon these starting points to create an initial prototype design for the new programmes and use this as a starting point for further iterative design conversations.

Faculty were also keen to become more systematic in how we reflected upon the data used to evaluate our programmes. To add further structure to discussions, it was decided that post-workshop meetings should adopt a format based upon after action reviews (described in Section 6.1).

11.2.2 Planning action

To begin the planning process in this cycle I developed an initial prototype design for the new team programmes based upon the learning from the previous cycles. This reflecting the earlier prioritisation of modules by the faculty and attempted to create a flow of content that would allow core programme concepts to be introduced in early modules and reiterated in later modules.

Based on the learning from Cycle 1 I was keen to ensure that the overall design process encouraged faculty to be more explicit about the principles underpinning design decisions. This reflected two considerations.

- I reasoned that having agreed design principles would aid faculty in later creating detailed module content so that it aligned with the programme's overall requirements.

- I recognised that faculty were likely to have diverse views on how to use the six days and thus design principles could act as mutually agreed constraints on the design options. This would aid the selection of a final design.

The latter point reflects a design technique used in innovation processes where multiple options are possible. Constraints are introduced to provide fixed points within the creative process that act to limit the possible options and focus creative efforts (as discussed by Rosso, 2014).

To agree the final programme design I therefore led a cyclical process whereby a succession of prototype designs were discussed with faculty to identify the design principles. As

principles were identified they would be incorporated into subsequent prototypes. In this process as each design principle was articulated its implications were considered collectively by the faculty. This also helped to identify where different principles suggested contradictory programme designs so that compromise positions could be agreed.

Design principles were identified in two ways.

- They emerged explicitly as faculty members described desired features of the programme and were encouraged to articulate the mechanisms they represented. For example having some activities recur at consistent times in each workshop (such as action planning) was thought to help create patterns of participant expectations and therefore encourage appropriate activity.

- They also surfaced as reactions to the prototype designs as faculty articulated their objections or made suggestions for improvements.

The prototypes therefore acted as 'boundary objects' (Star and Griesemer, 1989) that helped to reveal faculty perspectives. Further, as the principles typically represented faculty views on the learning mechanisms required in TCSL, this process also served to share and align perspectives on learning and transformation across the faculty.

Three iterations of prototypes were used to eventually identify the final programme design and its eight main design principles. Many of these principles reflected emerging patterns of faculty thinking seen in Phase II.

- As a response to earlier participant feedback we wanted to increase, or at minimum maintain, the time allocated to team based discussions. These were viewed as central to 'sense-making' processes (as described by Weick, Sutcliffe and Obstfeld, 2005), allowing a translation of TCSL concepts into individual and team practices.

- We wanted each day or workshop to represent a coherent whole that would connect together the module content in that part of the programme. This reflected the wider goal embraced in Phase II of encouraging participants to see TCSL as a connected whole.

- We saw value in creating patterns within the timetable for successive workshop days that would act as mechanisms to cue specific behaviours. For example scheduling periods of action planning at consistent times in each workshop to prompt a

psychological movement from absorption of TCSL content to making decisions on how to use it.

- Benefit was recognised in reinforcing a narrative arc that would connect the early introduction of the nine factors framework to the later work by participants on their own models of change. This arc would incorporate recurring emphasis on the need for participants to integrate TCSL content into their professional practices. It would also gradually create a more sophisticated view of transformation as we progressed through the programme. This would shift from an early simplistic emphasis on transformation as different from mechanical approaches to change to later suggest that the two approaches should co-exist (reflecting the positioning described in Section 4.1).

- We wanted to use the programmes to introduce and test new or revised content. This responded to participant feedback on our modules and also reflected the faculty's growing awareness of potentially relevant concepts (also identified in the interview process in Section 8.1).

- The modules relating to innovation were recognised as forming a naturally coherent group where activities could build across modules as part of an in-workshop innovation process. Further, it was identified that this group could be placed anywhere in the programme schedule as a largely self-contained set of concepts within TCSL.

- We wanted to leave some time unallocated in the final workshops in each cohort to give participants an opportunity to shape their content. This was felt to help participants take more ownership of identifying the support and knowledge they required in delivering transformations. Their pull for content could also provide insight for faculty that might shape future programmes.

- We felt that peer review processes and dedicated reflection periods could offer new mechanisms to drive learning and action. These were also suggested as recurring elements across the workshops.

The desire to incorporate dedicated reflection periods for participants outside of the module structure was a significant departure from earlier programmes. Faculty discussions suggested that reflection could support the process of integrated action planning introduced

in Cycle 3. It was believed that by reflecting on their actions (past or proposed) in the broad context of TCSL, participants could be helped to step outside of the narrow focus imposed within each module. Thus conceptually Figure 50 was expanded to become the three mutually reinforcing elements shown in Figure 51.

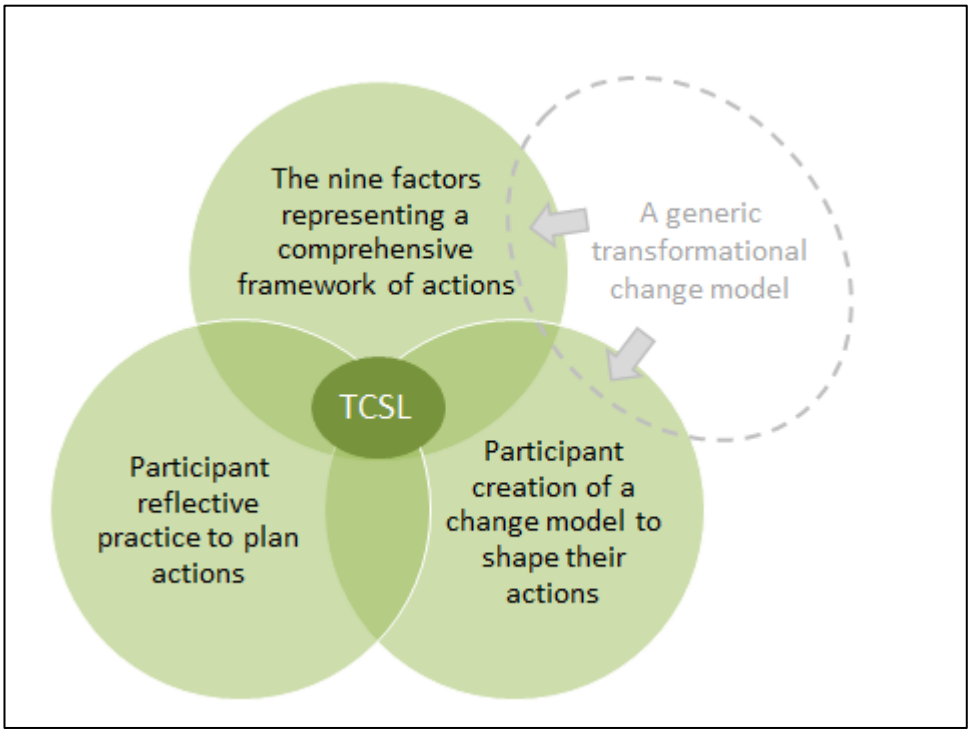


Figure 51: Methods for integrating TCSL content across modules

To support reflective practice a new reflective cycle was introduced for these programmes that participants were encouraged to use both in the workshops and outside. This was co-designed with other faculty members and is shown as Figure 52. It draws upon the AR processes described in Section 4.2 as a model of action and reflection. It also deliberately echoes the PDSA (Plan, Do, Study, Act) cycles of service improvement that would be familiar to many participants (e.g. in Langley et al., 2009).

Figure 52: A reflective cycle designed for use by TCSL participants

Discussions of reflective practice also identified a new polarity within the design principles. This centred on opposing perspectives about how TCSL content is most effectively assimilated into participant professional practice over time. One pole was represented by the 'frontloading' of knowledge about transformation concepts and techniques. Here it was argued that TCSL content should be provided in a rapid sequence of workshops so that participant action outside of workshops would occur with full knowledge of TCSL content. The other pole favoured 'extended' teaching that would allow content and action to occur in cycles over a longer period. This would mean that some content would be taught, enacted and reflected upon to create experiential knowledge before participants received more content.

This polarity and its accompanying arguments are depicted in Figure 53.

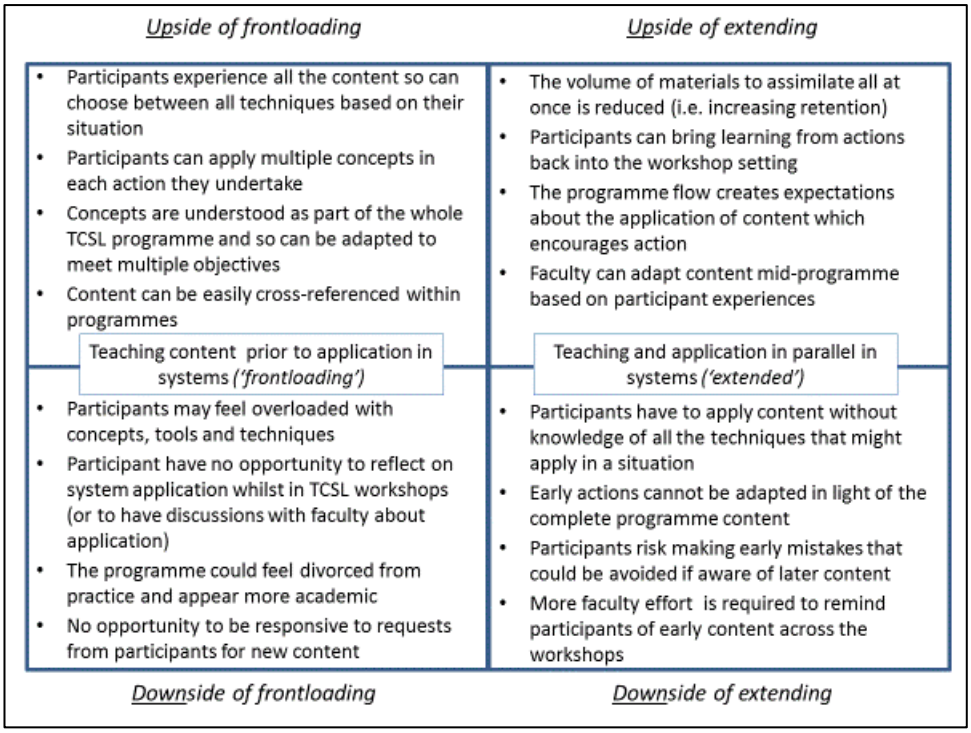


Figure 53: The polarity of frontloading versus extended teaching

This new polarity challenged how the reinforcing process of Figure 51 should be interpreted in practice as illustrated in Figure 54. By focusing on content (represented in the figure by the nine factors element), 'frontloading' would support later reflections on actions that would be based on a deep knowledge of TCSL content as a connected whole. However in an 'extended' approach, reflections on actions based on partial knowledge would help to create data that could support a better understanding of TCSL content introduced later in the programme.

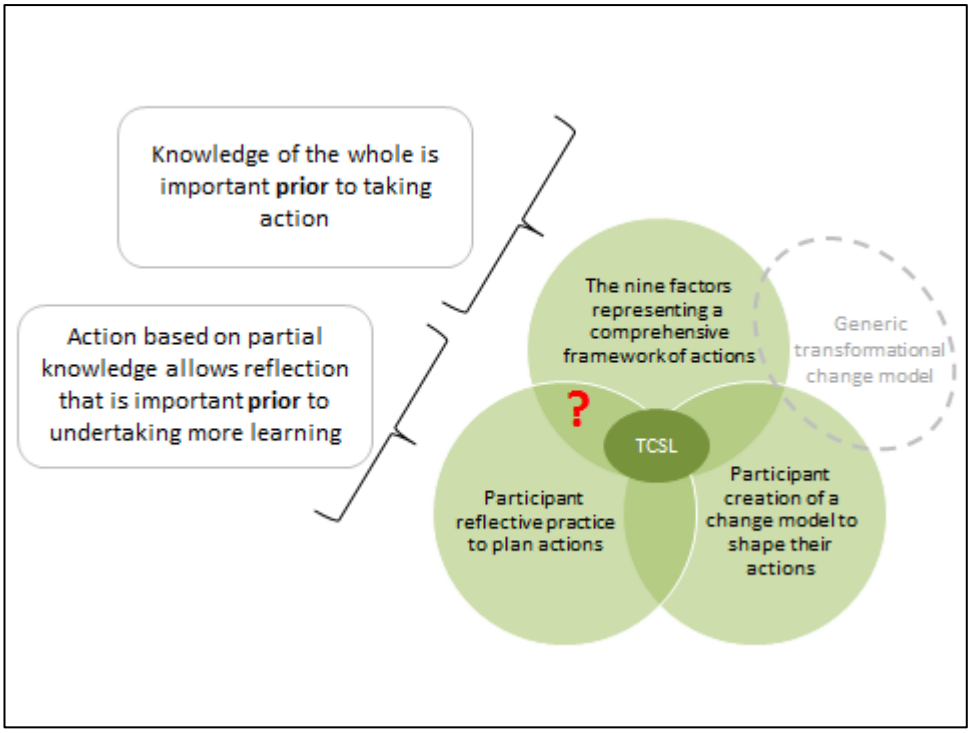


Figure 54: A challenge inherent in the three approaches shaping TCSL design

To a degree this polarised debate reflected differences in emphasis between the declarative knowledge created through experiencing TCSL and the procedural knowledge created through its application (both described in Ten Berge and Van Hezewijk, 1999). Faculty discussions therefore touched upon preferences between different ways in which reflective practice can be used to move from one form of knowledge to the other.

Like all polarities there was no definitive right answer in choosing between the two poles (Johnson, 1992). However, the January 2017 design decision to spread out workshop delivery over a number of months had created what amounted to an extended model (i.e. participants would be taking significant actions in their change projects before experiencing all of the modules). Faculty therefore saw the need to manage the downsides shown on the right of Figure 53 that represented the risks of participant action where their exposure to TCSL content was incomplete.

This led faculty to the conclusion that the emphasis on the nine factors introduced in Insights in Phase II should be further reinforced through additional early materials that would describe TCSL's main messages. In this way, additional knowledge could be conveyed that would help to mitigate the risks of the extended delivery model. Early exposure to such knowledge therefore became an additional design principle.

To support this new feature I undertook an additional AR process within this cycle to create and evaluate a short guide to leading transformational change as described separately in Section 12.2. This guide was supplied to participants at the start of the TCSL programmes and summarised the main TCSL concepts. It therefore complemented the nine factors framework and provided participants with the required early exposure to the TCSL content.

In addition, in the design principles the faculty expressed a desire to provide scope for introducing new content into the programmes. This interest had already arisen in the faculty interviews (Section 8.1) and was reinforced in the module review of Cycle 1. These had indicated three main drivers for content changes.

- Belief that some content lacked strong enough ties to contemporary theories of change practice.
- Historic faculty or participant dissatisfaction with the way some modules supported learning and action.
- Growing awareness of new content areas that might be relevant to transformational change but not currently represented in the knowledge domains.

To develop these content changes I suggested to the faculty that we adopt a collective process that would help us share our knowledge of the academic literature and our professional experiences of change. This recognised the contribution that each faculty member could make based on their unique academic and change experiences.

In my researcher role I agreed to facilitate a process of enquiry and discussion to review six topic areas that were prioritised in an initial faculty meeting. These were

- the role of a vision and techniques for vision creation,
- how to manage programmes in ways that allowed for system complexity,
- how change leaders could use qualitative intelligence to understand system patterns,
- ways to improve the effectiveness of teams leading transformations,
- understanding the role of personal resilience in change leadership and how to develop it, and

- what is meant by culture and how cultures can be altered.

The first four of these topics already existed as knowledge domains whilst the last two were suggested as potential new domains identified as a result of the enquiries in Chapter 8.

To support discussion of these topics I initially undertook a high level review of the literature in all six areas to provide basic summaries of dominant models or theories. I also used my knowledge of TCSL to suggest ways in which each topic might be relevant to transformational change. Faculty members also undertook complementary reviews to help ensure a broad examination of the literature.

In my researcher role I facilitated faculty discussions of each topic area, seeking to connect conversations to earlier cycles and highlighting new collective insights. The exploratory nature of the conversations meant that I could move relatively easily between my participant and facilitator perspectives. Appendix H summarises the learning and actions that came out of these discussions.

Overall, this process supported faculty to think critically about their own experiences and the academic literature. It also provided a collective sense-making that became reflected in the TCSL modules and the programmes. For example

- Faculty shared new interpretations of existing TCSL content and the academic literature, revealing views on the mechanisms of transformation. For example, building commitment to a vision was discussed as a process of 'socialisation' (i.e. the encouragement of behaviours that are acceptable to a group). This helped faculty to explore how socialisation differed from actions that merely communicated a vision.

- The conversations helped to create bridges between different theoretical perspectives. For example the faculty's growing awareness of complexity theories provided a framework for discussion about how participants might manage their programmes of change. This led to a hypothesis that programme management should be viewed as an enquiry led process based on creating an evolving understanding of a system and the impact of change activities. This contrasted with prevalent traditional views of programme management based on measuring progress against a plan (e.g. Office of Government Commerce, 2007).

- Further links between different knowledge domains were created. For example, faculty realised that many of the actions associated with building resilience were

already represented in a variety of knowledge domains. This was recognised as echoing a finding of the longitudinal case studies (Section 8.3) where TCSL was described as aiding resilience. The connected nature of TCSL content could therefore be further reinforced.

- Faculty recognised areas of collective uncertainty or ambiguity about how to incorporate some topics into TCSL programmes. For example in discussing qualitative intelligence the importance of detecting weak signals of underlying system patterns was considered. Faculty noted that most research oriented approaches to qualitative analysis focus implicitly on strong thematic signals. How to detect valid weak signals of deeper underlying system patterns was unclear.

As the outcomes noted in Appendix H demonstrate, this process was also of practical help in progressing the development of TCSL content. All six discussion areas resulted in new modules or changes to existing modules that were reflected in the programmes in this cycle.

In addition, these programmes also incorporated a new module entitled 'The NHS reality'. This was developed during the course of programme delivery in direct response to participant requests (reflecting the content flexibility noted in the design principles). Participants had asked for a session that would help them to link TCSL content to the types of challenges they were experiencing in today's NHS context. With faculty colleagues it was agreed that some of the knowledge generation processes of Chapter 8 provided the requested contextual view of the NHS. For example, the longitudinal case studies (Section 8.3) offered a way to describe the challenges experienced by other TCSL participants. In a similar vein, the action suggestions offered in the chief executive interviews (Section 8.2) could be described as an authoritative response to working within the current NHS reality. A new module was therefore co-designed with other faculty members. Figure 55 and Figure 56 show slide images taken from this module reflecting the enquiries of Chapter 8.

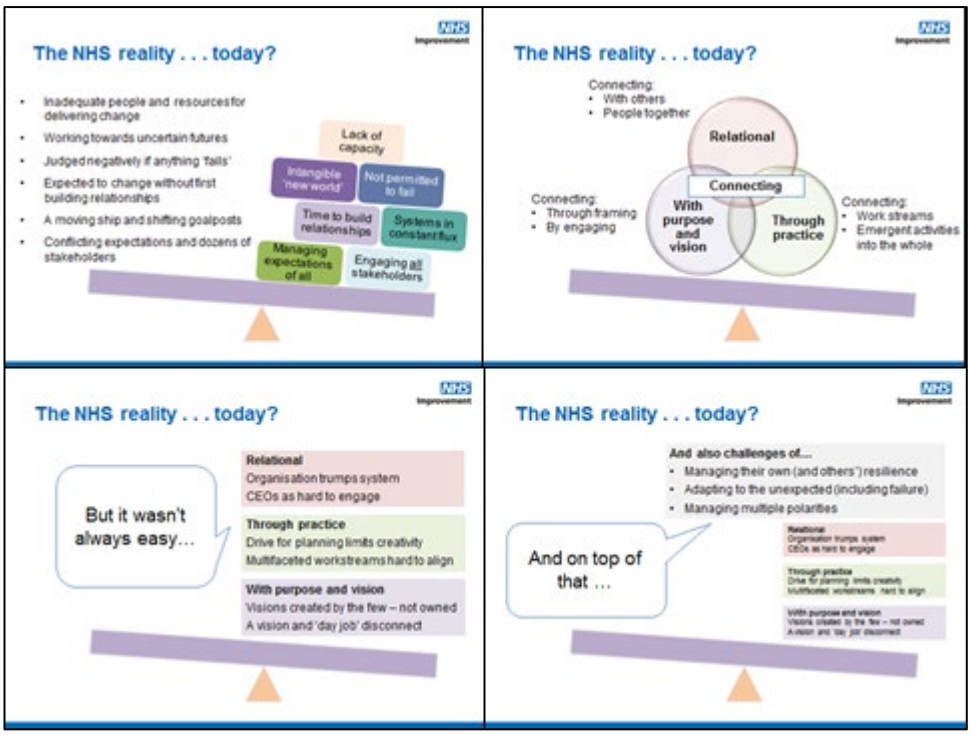


Figure 55: New module slides based on the longitudinal case studies

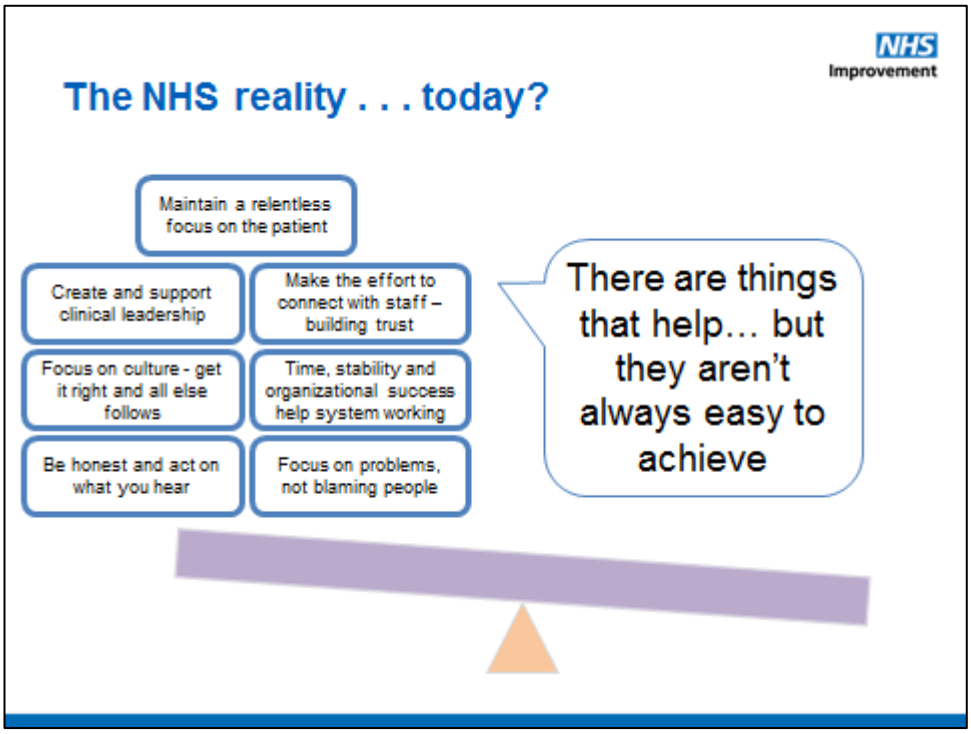


Figure 56: New module slide based on the chief executive interviews

11.2.3 Taking action and evaluating

The new team programmes commenced in September 2017 and were completed in January 2018. Unlike previous programmes their extended nature meant there was an opportunity

to adapt delivery and content in response to mid-programme feedback after each workshop. After action review processes were therefore undertaken following each pair of parallel workshops to discuss evaluation data and agree alterations to subsequent workshops.

Each review occurred 1-2 weeks after the later workshop in each pair and included data generated from participant questionnaires and ad hoc workshop based interviews by a non-faculty member (as described in earlier cycles). Questionnaires included feedback on the revised modules and the new approaches to participant learning introduced as a result of the design principles. Similarly, reflecting the desire to create more integration of messages across the modules, feedback was extended to include views on each workshop day and the programme as a whole. To reduce the overall feedback burden, module level ratings were limited to participant views on their relevance and delivery. In addition, to generate understanding about the use of module content, the later questionnaires enquired about participants' use of the content introduced in earlier workshops. Appendix G includes full details of the questionnaire design and analysis.

For the two 'A' workshops Figure 57 shows the proportions of 'very good' ratings for the relevance of module content for each module. Data has been combined for the workshops.

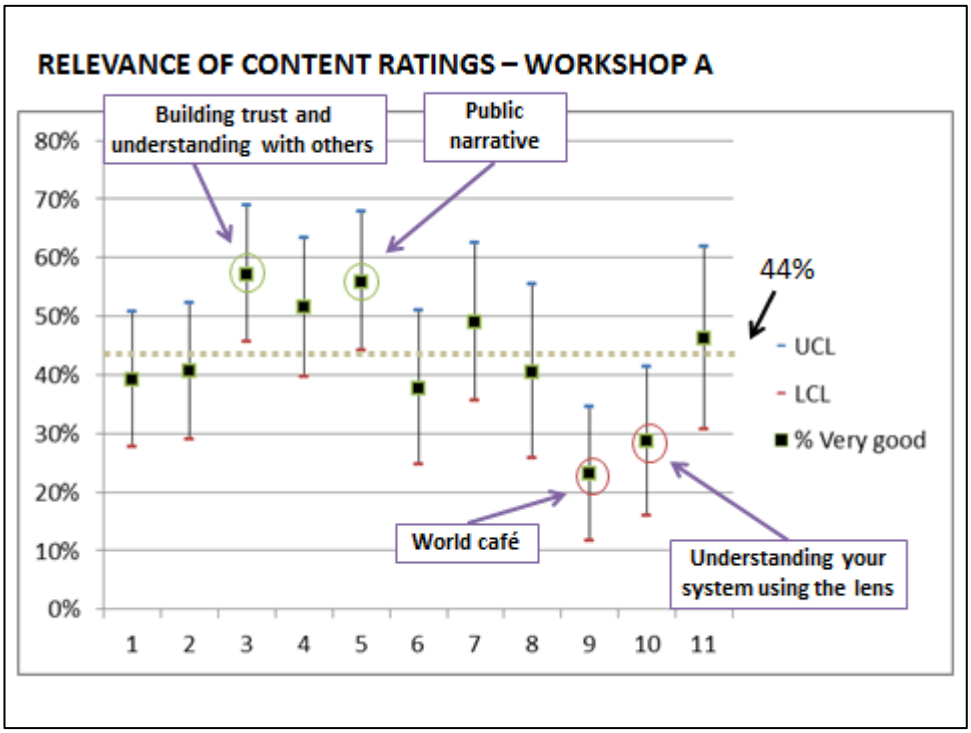


Figure 57: Content relevance analysis (Sept & Oct 2017 cohorts, workshop A)

The 'A' workshops included module changes resulting from earlier discussions. For example as a result of Cycle 1 changes were made to the module on 'Emotional intelligence' to

emphasis its central importance to change leadership. Also in this current cycle the modules on 'Creating a vision' and 'Improving team effectiveness' were altered following the faculty review process. None of these changes resulted in significant ratings in Figure 57 when compared to the overall proportion of 'very good' ratings across the 'A' workshops. In general however the altered modules received reasonable ratings for their content and positive qualitative comments.

For the 'A' workshops as a whole the faculty were satisfied with achieving 44% of ratings as 'very good' which was in keeping with other programmes. In the after action review discussion (summarised in Appendix I) faculty noted that our renewed emphasis on the nine factors framework had been rewarded with good engagement in the associated activities. Participants had described this module as a helpful conversation starter, prompting discussions about their approach to change. It was noted that participants also liked the structure of the workshops (with over 80% rating each day as 'very good' or 'good'), commenting positively on the opportunities to build relationships within their teams. As in previous programmes the positive ratings for the 'Public narrative' module were believed by faculty to reflect its novel content, thought likely to be unfamiliar yet relevant to most participants.

Within both cohorts faculty noticed that a higher than usual proportion of the teams appeared to be newly formed. This context meant that participants had less experience with their colleagues and were sometimes less advanced in agreeing the shared goals for their team project. This was hypothesised as influencing the ratings shown in Figure 57. The positively rated module on 'Building trust and understanding' allowed time for teams to share their different worldviews with each other and so would have aided newer teams. In contrast, the negatively rated 'Understanding your system using the lens' module relied on each team having agreed goals and so may have been a less helpful approach for newer teams who had yet to refine their objectives. Similarly, the negatively rated 'World café' module (representing our new efforts to encourage peer review) would have been more demanding for newer teams who had yet to make much headway in their change work.

The review discussion also focused on ways to further support participant reflective practice in later workshops as faculty felt that it had not been sufficiently encouraged. For example it was noted that in plenary discussions participants rarely contextualised TCSL content within their professional practice, instead preferring to discuss points of theory without linking

these to their projects. This resulted in changes to the design of the 'C' workshops to incorporate additional structured reflection time.

From the small number of critical comments received the only consistent theme was the request for more time to be allocated to team discussions in the various modules. Faculty felt that this would improve naturally as more time had been incorporated in the module designs for the later workshops.

The overall faculty satisfaction with the 'A' workshops meant that no major changes were made to the proposed design for the 'B' workshops. These took place approximately one month after the 'A' workshops and the resulting questionnaire ratings for relevance of content are shown in Figure 58. Additional questionnaire analysis is provided in Appendix G.

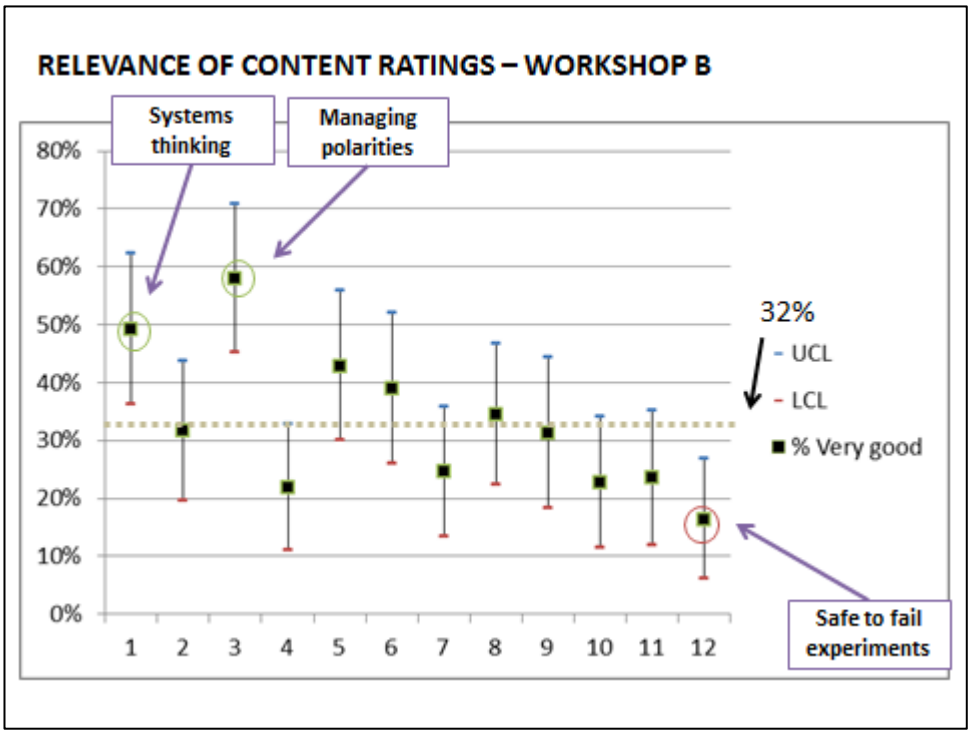


Figure 58: Content relevance analysis (Sept & Oct 2017 cohorts, workshop B)

Overall this demonstrated slightly lower ratings than the 'A' workshops and also suggested that participants found the second workshop day (modules 7-12) less relevant than the first.

Like the 'A' workshops some modules had been altered as the result of earlier discussions. The 'Using qualitative intelligence' module had been revised earlier in this cycle and feedback indicated that most participants appreciated this module but opinion was still divided on its value. This appeared to reflect different prior experiences of using qualitative data in research settings (i.e. participants with research experience felt the module lacked depth).

Similarly, the module on 'Managing your programme' had been revised to emphasise the cyclical nature of programme management and the role of dialogue about programme progress. This module received positive feedback. Participants valued its pragmatic focus and the time it allowed to review their programme delivery approach.

Earlier in this cycle the faculty discussions of new module content had led to two new modules being introduced to the 'B' workshops. The module on 'Developing personal resilience' received overwhelmingly positive feedback with some participants noting the value (and rarity) of having time to consider this very personal aspect of their professional practice. The module on 'Culture change' was equally positively received. Participants noted how it provided a stimulus for helpful conversations. Both sets of feedback led faculty to conclude that these modules should remain part of future programmes.

The after action review discussion held after these workshops is summarised in Appendix I. As before, it considered the questionnaire data, findings from the ad hoc interviews and faculty experiences.

In reviewing the evaluation data, faculty noticed an association between participant ratings of content relevance and comments criticising the 'overly theoretical' nature of some modules. This was hypothesised as resulting in part from our earlier design decision to bring together modules with similar themes as part of our integration efforts. For the 'B' workshops this had resulted in clustering together those modules that had a complexity focus, resulting in a series of modules covering more conceptually difficult topics. The feedback also indicated that we had not fully succeeded in translating these topics into practical change activities. This led faculty to modify or remove some of these modules for the February 2018 programme.

This discussion of how we presented conceptually difficult concepts in TCSL programmes also revealed different faculty perspectives.

- Some faculty advocated closer working with individual teams to help translate concepts into practice (e.g. adopting a coaching role). This reiterated a theme identified in the faculty interviews (Section 8.1).

- It was suggested that as some modules were being delivered as very short sessions, participants did not have adequate time to move from understanding the theory to reflecting on its implications for their practice. In effect they were only partially

progressing through Kolb's learning cycle (1984). Faculty therefore decided to review the time allocations for those modules retained for the February 2018 programme.

- It was accepted that some modules (e.g. 'Volatility, uncertainty, complexity and ambiguity') were necessarily reliant on conveying theoretically demanding concepts and could not easily be simplified further without undermining their value.

This discussion also prompted thoughts on our rationale for choosing to emphasise academic theories in some of these modules. In an example of the double-loop learning described by Argyris (1976), some faculty began to challenge our implicit premise that the introduction of theory was a necessary step in advancing participant knowledge and action. This was expressed as two alternative hypotheses.

- The focus on theory could represent a mechanism by which faculty were seeking to demonstrate our knowledge in order to build our credibility. Knowledge of theory therefore might be serving to highlight our difference from participants and justify our pedagogical role.

- The use of theory could equally be part of an unconscious defensive routine occurring where faculty found topics difficult to translate into practical advice. Our resort to theory would draw attention away from this deficit and would transfer responsibility for practical interpretation to participants.

Both hypotheses had some resonance with faculty members as partial accounts of our less conscious practice. We therefore agreed that in advance of the February 2018 programme each faculty member would review all the modules they led on, remaining cognisant of these hypotheses to challenge our use of theory.

Another discussion area arising from the data related to the consistent participant requests for more time for team based activities, echoing similar findings from the 'A' workshops. For faculty this was felt to be difficult to address as efforts had already been made to maximise team discussion time. It was also noted that our programmes could not realistically be extended beyond their current six day duration as participants would find it increasingly difficult to negotiate time away from their systems. To respond to the request for more time our only option therefore appeared to be to reduce the number of modules delivered in future programmes.

In my researcher role I chose to help the faculty explore the potential for reducing the number of modules. Taking the realist evaluation stance described in Appendix B, I initially focused the faculty on consideration of the learning and application mechanisms specific to a workshop environment. This was to determine whether a workshop setting might be more appropriate for some modules. Faculty discussions suggested two main mechanisms. Firstly, the workshop setting was believed to offer containment for difficult conversations that might not be available in the workplace. Thus workshops could offer the psychological safety required to explore issues causing anxiety (as described by Eichholz, 2014). Secondly it was felt that the structured nature of TCSL workshops encouraged some activities and discussions that culturally tended to be addressed superficially in NHS change activities. This included diagnostic activities like stakeholder analysis and efforts at team development. These mechanisms suggested that some modules should be preferentially retained within the workshops as their activities may not be replicated within the system settings.

For faculty, the prospect of removing modules also prompted reflections about the ways in which we were interpreting the questionnaire data and the extent to which this data could guide our decisions.

- Some modules were described as evoking strong positive or negative reactions in participants so that individual rating scores became polarised. The use of 'very good' proportions or average rating scores was therefore recognised as offering an incomplete picture of a module's value. However, the research decision (in Section 6.1) to share all data, rather than just summary data, with faculty in advance of discussions was recognised as helping to raise awareness of these polarised perspectives.

- Similarly, diverse reactions by participants were recognised as sometimes reflecting prior learning experiences. As noted earlier, 'Using qualitative intelligence' was sometimes described as a cursory overview by those with qualitative research experience but viewed as highly valuable by those only familiar with quantitative methods. This suggested that in the future it might be appropriate to offer choices about participation in some modules.

- Faculty recognised that the different delivery styles of the faculty members could impact across multiple ratings for a module (i.e. with some inevitable conflation between perceptions of the value of module content and the clarity of delivery). It

was noted that within modules there was evidence of a correlation between these ratings (as described in Appendix G). However, as module delivery was usually observed by other faculty members this meant that the potential impact of delivery weaknesses could be taken account of in faculty discussions.

- It was suggested that some module activities were naturally more enjoyable than others, potentially prompting participants to give higher relevance ratings. This was viewed as impacting positively on some of the innovation based modules related to creative thinking.

- Faculty discussed the need to differentiate between intrinsically low value knowledge domains (i.e. those containing unhelpful content) and modules which did not yet present the knowledge domain content appropriately. The latter were potentially still open to improvement. This was felt to be the case with some of the complexity orientated modules where the emerging nature of the field meant that some suggested practices were yet to have a firm evidence base for their application in organisational settings.

Overall this discussion led to a decision that for the February 2018 programme described in Cycle 5 an attempt would be made to reduce the number of modules to allow for more team based discussion time.

Despite this focus on potentially changing the design of future programmes, the faculty were generally satisfied with the 'B' workshops. Participants had again rated the structure of the days highly (i.e. a mean 'very good' and 'good' rating for the two days of 84%). Data also indicated that most participants had attempted to apply the content covered in the 'A' workshops when back in their systems, remaining supportive about how those workshops were of value to their change work.

The 'C' workshops occurred approximately two months after the 'B' workshops. The first day of each had a focus on innovation. As noted earlier, the structure of the second day had been partially left open to reflect participant requests and any learning generated from the after action review meetings. Consequently, this day now included a significant amount of time set aside for teams to work on their projects with additional time allocated for personal reflection. The day also included the new module requested on 'NHS challenges'.

Like the previous workshops some modules had already been altered from earlier programmes as a result of the design discussions. In particular, the narrative arc that emphasised participant creation of their own change models was reinforced through a new module entitled 'Building your approach to change'. Also, a new module entitled 'Metaphors for change' was introduced. This represented my own personal interest in the way that different metaphors can influence our thinking about change, building upon the perspectives offered in Section 4.1.

The 'C' workshops were evaluated using the same processes as described earlier in this cycle. Questionnaire ratings for relevance of content are shown in Figure 59 with additional questionnaire analysis provided in Appendix G.

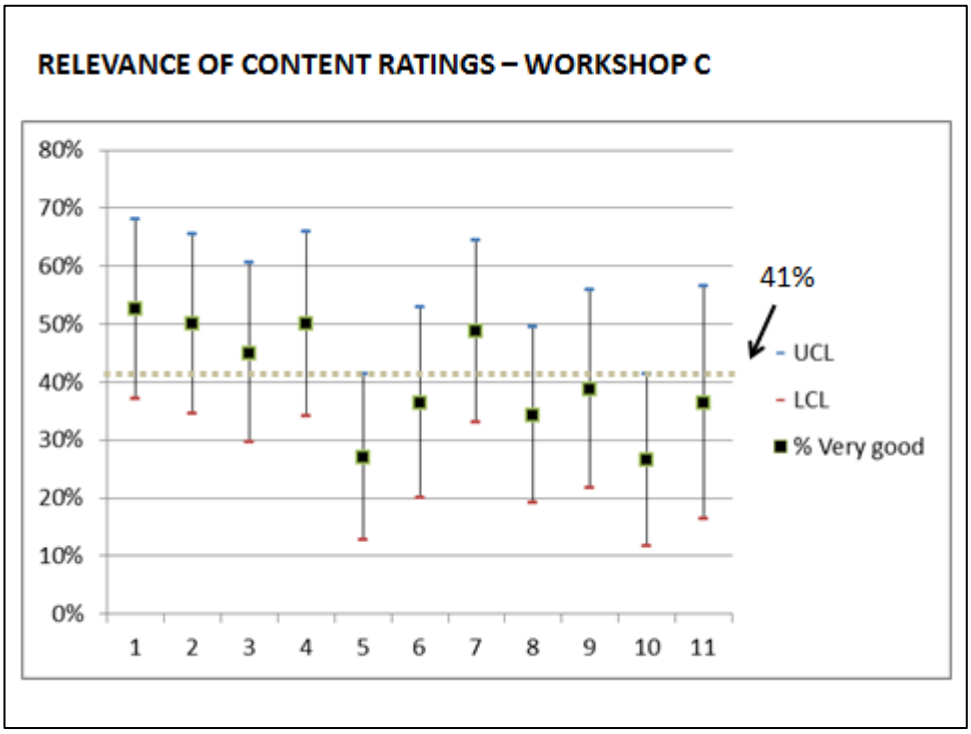


Figure 59: Content relevance analysis (Sept & Oct 2017 cohorts, workshop C)

The relevance data indicated an overall proportion of 'very good' ratings (41%) in keeping with previous programmes without any modules achieving statistically significant results when compared to this.

The evaluation data showed the 'NHS challenges' module to have been a mixed success. Qualitative feedback indicated that although some participants found this module helpful in challenging their thinking, others struggled to move beyond their frustration with what they perceived as unnecessary barriers to change in the NHS. For faculty, this latter finding was unsurprising as they felt that a significant aspect of the request for this new module was a

participant desire for a cathartic voicing of their frustrations (similar to the experience described in Cycle 3). The module therefore served the participant need of helping to relieve some feelings of stress but did not achieve the faculty aspiration of informing actions.

However, for the other two new modules the participant comments were generally positive.

- Comments on 'Building your approach to change' suggested participants valued the time to discuss their change models although some found it difficult to create a comprehensive approach in the time available.

- Comments on 'Metaphors for change' demonstrated that this session had been highly beneficial to most participants. Many commented on the power of the approach to challenge their thinking, deriving insights from adopting new perspectives based upon the metaphors.

It was therefore decided by faculty to retain these new modules for the February 2018 programme and make greater efforts to encourage participants to develop their models of change throughout the programme.

The inclusion of reflection time was also assessed alongside the modules. Feedback was mixed. Some participants welcomed having time set aside to reflect. Others found it hard to 'reflect on demand', suggesting that the workshop setting did not support their personal reflective preferences. Faculty wanted to continue to encourage reflective practice and so decided to continue to set aside time in the February 2018 programme although with a less structured approach to how participants were asked to use the time.

The after action review discussion is summarised in Appendix I and for these final workshops the review process naturally extended to include reflections on the two programmes as a whole.

Overall faculty were satisfied with the 'C' workshops. Delaying their detailed design was viewed as successful in allowing the intended flexibility to respond to our learning and participant feedback. Data from participants suggested they had appreciated these efforts, in particular the way the final workshop day provided significant opportunities to work within their teams.

Faculty discussions revisited the questionnaire data from across all of the workshops together with the programme summary questions incorporated into the 'C' questionnaires.

The latter showed that 93% of participants rated the overall programmes as 'good' or 'very good' with similar high numbers willing to recommend TCSL programmes to others.

Data on the relevance of content ratings for individual modules are combined together in Figure 60 where the three workshops (A, B and C) are denoted by grey bands. Statistically significant ratings are numbered. Due to the use of an overall 'very good' proportion derived from all workshop data (39%), more modules appear in Figure 60 as significantly negatively rated when compared to earlier data presented in this section. However, this made little difference to the interpretation of the questionnaire data by faculty except to further emphasise the clustering of lower relevance modules in the 'B' workshops (noted earlier as relating to complexity derived concepts).

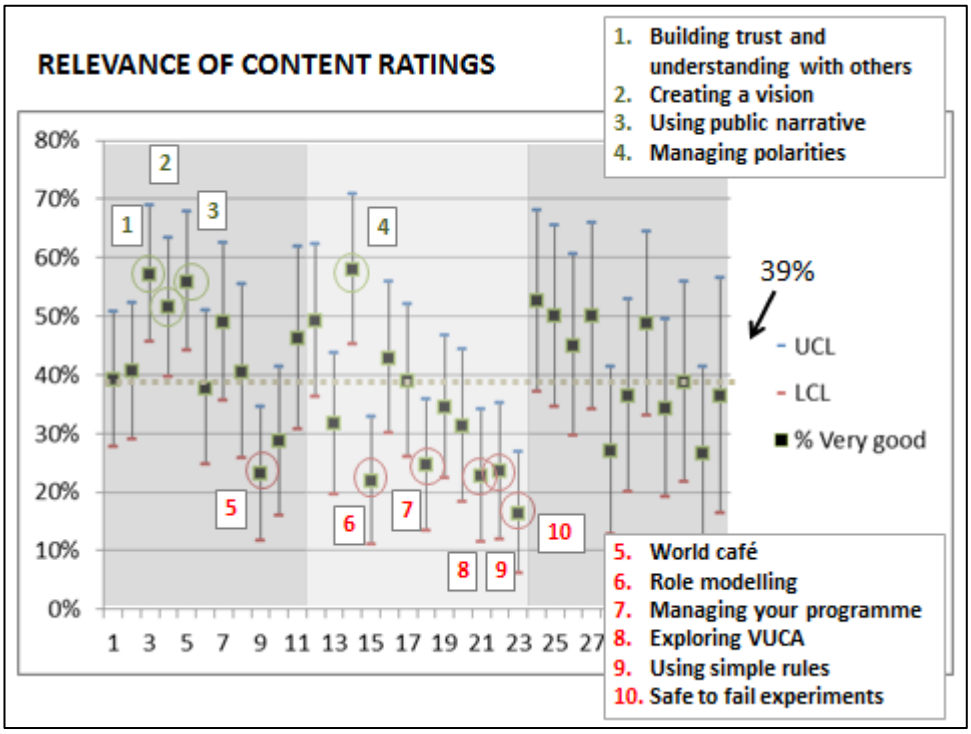


Figure 60: Content relevance analysis (Sept & Oct 2017 cohorts, all workshops)

Qualitative workshop questionnaire data was also reviewed in more detail. Across all of the workshop questionnaires 582 comments were made about specific modules. In my researcher role I undertook a thematic analysis of these using the approach suggested in Braun and Clarke (2006). This identified a number of patterns, some of which had already been the subject of discussions in earlier after action reviews.

- Positive comments tended to be linked to module content being new to a participant or where it had helped them to better understand their current practice. Positive

comments also occurred where a module had led to a specific insight for the participant.

- In some modules where participants' views were mixed, this often related to how relevant the content was to their project at that point in time. This also influenced views on whether activity time was sufficient (i.e. more time was requested when content was viewed as relevant).

- Across all workshops some participants noted feeling tired towards the end of the two day workshops, sometimes referring to the intensity of the days.

- The day focused on innovation was perceived differently from other days with many more comments about how enjoyable it was.

- Modules that attempted to translate complexity related concepts into activities (e.g. 'Simple rules') tended to receive more negative comments as some participants described struggling to apply the activities to their projects or contexts.

Some of these patterns suggested that the impact of modules for particular participants or teams was context dependent. This context was both personal (e.g. existing knowledge, energy level, perception of fun etc.) and project based (e.g. the status of a project at a point in time, the ability of a module to spark a relevant insight etc.).

The questionnaire data also included the participants' summary comments about each workshop day. In my researcher role I undertook a content analysis of these comments (using the approach described by Hsieh and Shannon, 2005). This approach was chosen due to the brevity and lack of context for each comment which suggested a more quantitatively oriented method. The resulting themes are shown in Figure 61 ('What worked well') and Figure 62 ('What could be improved').

In Figure 61, 155 comments generated 169 coded items.

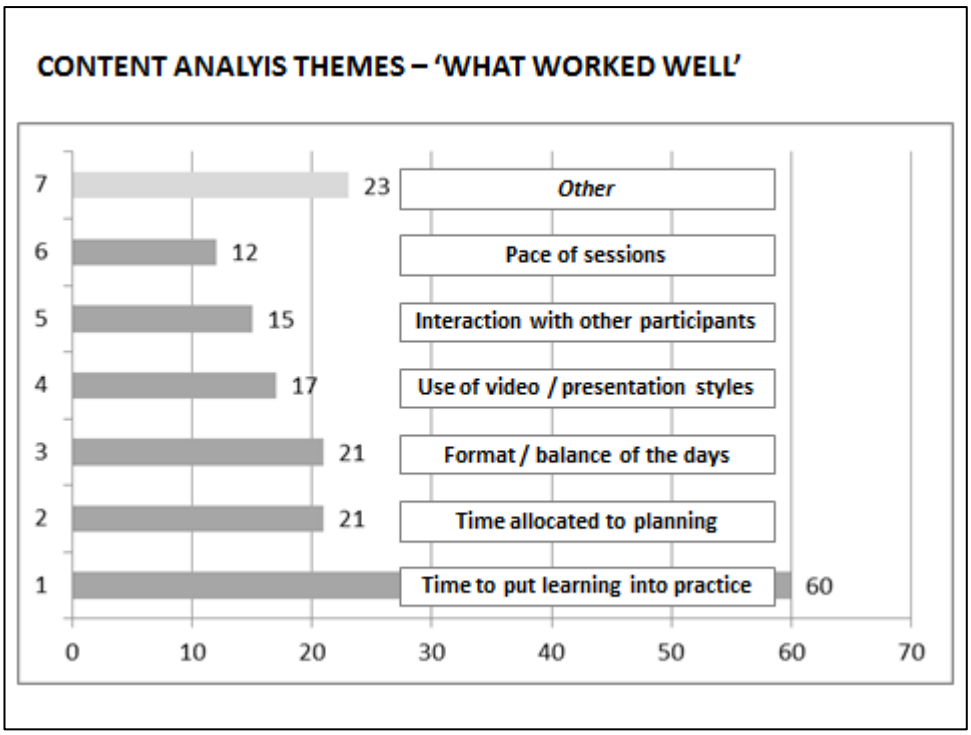


Figure 61: 'What went well' themes (Sept & Oct 2017 cohorts)

In Figure 62, 149 comments generated 148 coded items.

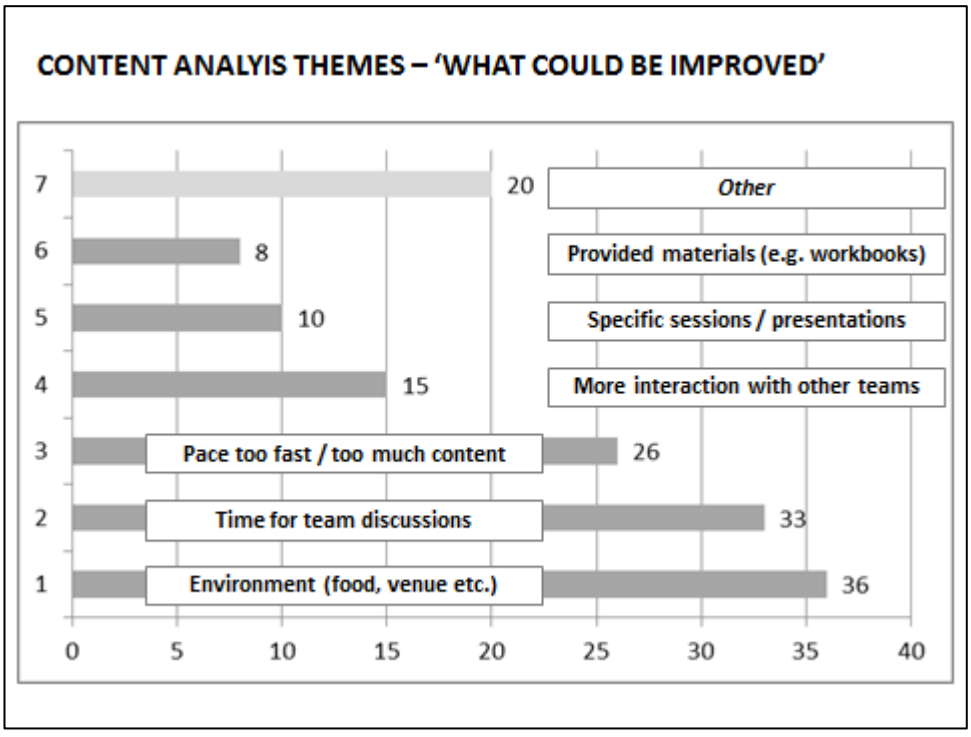


Figure 62: 'What could be improved' themes (Sept & Oct 2017 cohorts)

These two figures show that 'time' and 'pace' featured in both sets of comments. Participants valued the time in their teams to apply the module content or plan (48% of coded comments) but 22% of improvement comments suggested a need for more time. Linked to this was a

view (by 18% of respondents) that the days were too fast paced and intense (as reflected in the module comments), sometimes with too much content. There were also indications that participants valued the interaction across the teams and wanted more of this. These workshop based views were also echoed in the participants' overall comments on the programmes that were analysed separately.

These qualitative views had already mostly been considered in earlier after action reviews. This retrospective look at all of the workshop feedback therefore generally served to reinforce earlier faculty discussions and decisions. However, the comments about time and intensity brought faculty members back to discussing the merits of reducing the number of modules in future programmes. These further discussions started to reveal another polarity in our thinking, this time characterised as 'breadth' versus 'depth' as illustrated in Figure 63.

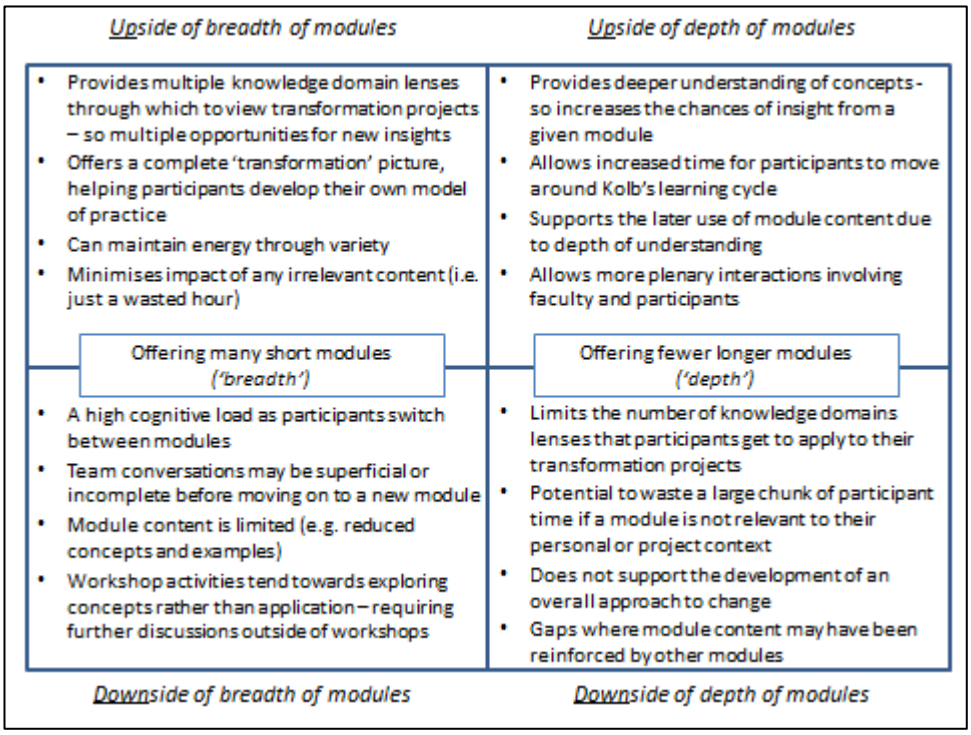


Figure 63: The polarity of breadth of modules versus depth of modules

Within a time constrained programme this polarity contrasts programme designs that incorporate many short modules covering many concepts with designs that have fewer modules but with each involving more in-depth exploration and team discussions. In this way it also represents an extension of the earlier discussions illustrated in Figure 51 where faculty had considered how TCSL content should be embedded into professional practice. Now this embedding was being seen as a potential trade-off between offering a comprehensive range of content and the time needed in workshops to embed this content into practice.

Like Figure 54 this polarity also highlighted a tension between providing declarative knowledge and enabling its conversion into experiential knowledge through application in workshops. This therefore prompted faculty to again consider its decision to reduce the number of modules but this time from the perspective of the impact upon our desire to provide a coherent and complete picture of transformation. This consideration formed the starting point for Cycle 5.

11.3 Cycle 5

11.3.1 Constructing

Following the completion of the September and October 2017 team programmes the faculty turned in this final cycle to the design and delivery of the February 2018 team programme.

Throughout Cycle 4 the after action review process had been used to suggest design changes required in this programme. However, discussions about increasing the time for team based activities and reducing the numbers of modules had led to significant uncertainty as to whether a more radical redesign of the programme was required. Faculty members therefore suggested that to inform this cycle we needed more data from participants in the 2017 programmes. This provided the impetus for a series of interviews that I undertook with participants in my researcher role that explored their experiences of the programmes and preferences for future programme designs.

During this cycle, activities resulting from the faculty's interest in exploring our collective views on transformational change (Section 8.1) also took shape. This took the form of an embedded AR cycle used to create a joint definition of 'transformational change' (Section 12.3) that eventually became part of a module delivered in the February 2018 programme.

11.3.2 Planning action

To support alterations to the design of the programme used in the previous cycle I offered to undertake interviews with some 2017 participants and report back the findings to the faculty. As only a few weeks separated the end of the 2017 programmes and the start of the February 2018 programme the interview and reporting process had to be rapid. I therefore agreed to summarise each interview within 1-2 days of it taking place so that they could inform parallel design activities as part of an iterative design process.

The overall procedure included the following.

- All participants in the 2017 programmes were contacted via email and asked if they would be willing to participate in telephone based interviews that would be used to inform future programme designs and this research.

- Seven people volunteered for interviews. All were subsequently interviewed using a semi-structured approach based upon a set of pre-defined topic areas agreed with faculty members. These included views on TCSL module content, programme design, the faculty role and participant interest in additional support. All interviews were recorded with participant permission.

- Due to the need for the interview data to inform concurrent design discussions the theming process had to depart from the detailed coding approach advocated by Braun and Clarke (2006). I identified themes and key points based upon a repeated review of each interview recording, in effect focusing on a rapid iterative movement between the initial three stages in the Braun and Clarke process shown in Figure 17. This allowed segments of text to be grouped under theme headings without detailed codes being produced. To support validity checking, interview themes were usually fed back to faculty alongside related interview extracts.

- When the interview summaries were fed back to faculty as written reports, faculty were asked to suggest areas for further investigation. These were then included in subsequent interviews. Common themes and contrasting views were identified on an on-going basis and included in the communications with the faculty.

Interview summaries were shared with the faculty. Alongside the themes and interview extracts these summaries included resulting questions that I posed for faculty based upon the themes. These acted as a mechanism for encouraging faculty discussions. Four of the seven interviews were presented in this format with the others limited to a less detailed listing of major themes due to time constraints.

Through this iterative process of interviews, thematic summaries and faculty interactions, the faculty gained further understanding of potential contextual factors and programme mechanisms that might inform the programme design. The interviews highlighted the following.

- Team (and system) diversity was suggested as impacting upon the time teams required for workshop based activities (i.e. highly diverse teams or more complex systems required longer discussions).

- Preparatory work by teams in advance of programmes was suggested as a way of overcoming drawbacks associated with new teams or poorly defined projects (as experienced in earlier programmes).

- Interviewees confirmed a link between the perceived relevance of TCSL modules and their project stage as hypothesised in Cycle 4. This suggested a need for faculty to consider how participants could be helped to return to early content when it became relevant to them later in their projects.

- Team composition was highlighted as important in determining whether TCSL activities led to actions. Participant authority to act and having broad stakeholder representation were viewed as important.

- Multiple factors were identified as inhibiting teams in sharing their progress with others in the programmes (e.g. modesty, embarrassment about progress, the lack of relationships with other participants etc.).

- A tension was noted between participants wanting to self-manage their learning (e.g. by opting out of sessions) and the faculty desire for complete participation in all programme elements.

- Participants valued the two-day workshop format as it allowed time to develop as a team, both through the activities and social interactions in the evenings.

- Participants appreciated the comprehensive and connected nature of the TCSL modules and no gaps in the knowledge domains were identified.

- Participant perceptions about the adequacy of activity time were suggested as sometimes linked to their preconceptions about the programme. Those who saw TCSL as providing guidance to be used outside of workshops were more welcoming of the pace and short activity periods.

These points did not suggest that any major design changes were required for the imminent February 2018 programme but they did influence how the faculty approached setting

participant expectations about it. For example, encouraging participants to set aside time outside of the workshops to work on their projects and periodically return to TCSL content.

A design was therefore developed based upon the 2017 programmes with a small number of modules removed in response to the discussions in Cycle 4. These modules were identified as ones where their removal would not damage the overall coherence of the programme. The time released through this was then used to expand team activities and to introduce further dedicated periods for reflective practice.

The final day in the programme was also altered in a number of ways. Due to capacity constraints the flexible approach to content adopted in 2017 could no longer be continued. The day was therefore redesigned to incorporate a variety of new or revised elements.

- A new module entitled 'Different conversations' was piloted by a faculty member to introduce a new knowledge domain relating to dialogue techniques.
- Time for teams to work on their change projects was increased in response to previous feedback.
- Participants were asked to revisit the nine factors framework as a way of assessing their progress in their change work through the course of the programme. This reinforced the narrative arc described earlier as well as encouraging reflective practice.

The final day also saw the introduction of the faculty's definition of 'transformational change' into a revised module. This definition was developed collaboratively as described in Section 12.3 and was intended to further reinforce the concept of viewing the programme's content as a coherent and connected whole. The definition featured as an alteration to the module entitled 'Building your approach to change', supporting the existing activity where participants were encouraged to develop their own model of change.

11.3.3 Taking action and evaluating

The February 2018 programme was delivered to 62 participants in 11 teams. As in Cycle 4, feedback data was collected via workshop questionnaires and short ad hoc interviews during workshops by a non-faculty member. A summary of the questionnaire design and results are provided in Appendix G. In my researcher role I once again supported the faculty to reflect on the workshops via a series of after action reviews.

Figure 64 shows the ratings for relevance of content for all of the modules in this programme. As found in Cycle 4 these results differed little from analysis performed at the individual workshop level.

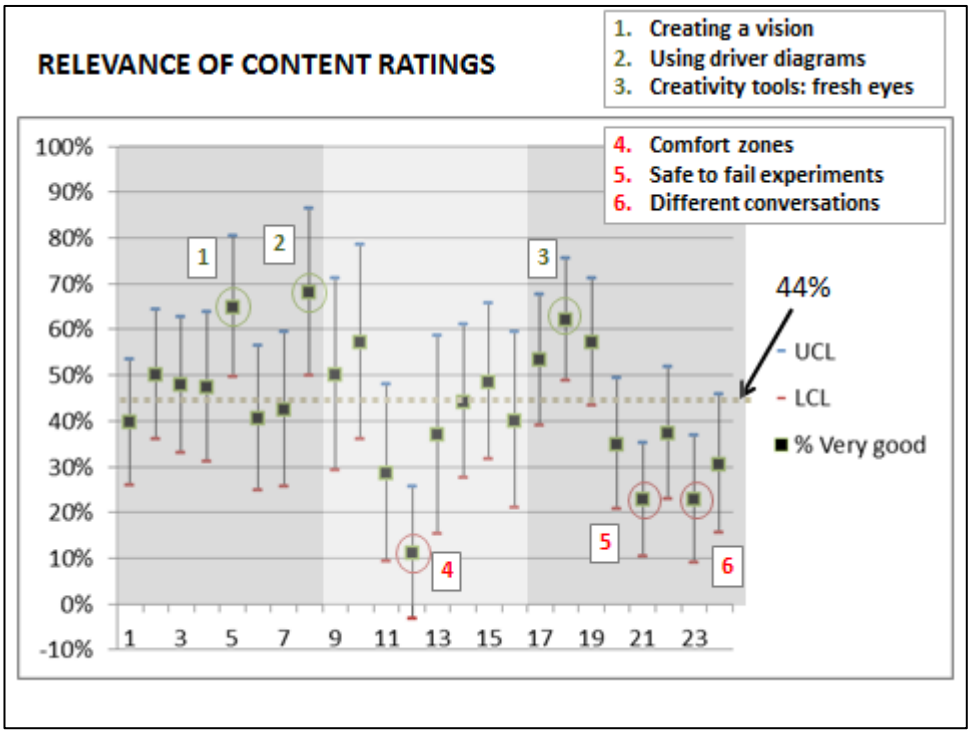


Figure 64: Content relevance analysis (February 2018 cohort)

The ratings shown in Figure 64 are broadly similar to those for the 2017 programmes (Figure 60). Overall the mean 'very good' rating was slightly higher (44% compared to 39%) but this was not a statistically significant difference (see Appendix G).

As a result of the module review process some of the less positively received modules delivered to the 2017 cohorts had been removed for 2018. However, the 'Safe to fail experiments' module had been retained and revised due to a faculty belief that this topic was highly relevant to transformational change. Its continued low rating suggested that the module was still not conveying its messages about experimentation in ways that could be adopted by all participants.

The new 'Different conversations' module developed by a faculty member to try and introduce processes of dialogue in the teams' change work was also comparatively poorly rated. This was subsequently removed from future programmes.

As with the 2017 cohorts the participants rated the individual workshop days. The statistical analysis comparing the six days is shown in Figure 65. Only the fifth workshop day (based

upon the theme of innovation) was identified as signiticantly different. This was in relation to ratings about the structure of the workshop days and it also received comparatively high ratings for its value and pace. This finding supported faculty perceptions noted ealier about how this day formed a naturally coherent unit. It was also suggested by faculty that this higher rating might have had a knock-on effect to create comparitively lower ratings for the sixth day in Figure 65.

Overall this data also highlighted that the pace of the workshop days tended to attract lower ratings than their value or structure. This echoed previous feedback about participant experiences of the fast pace and volume of content covered in the TCSL programmes. This was somewhat dissapointing as efforts had been made to reduce the pace by reducing the number of modules.

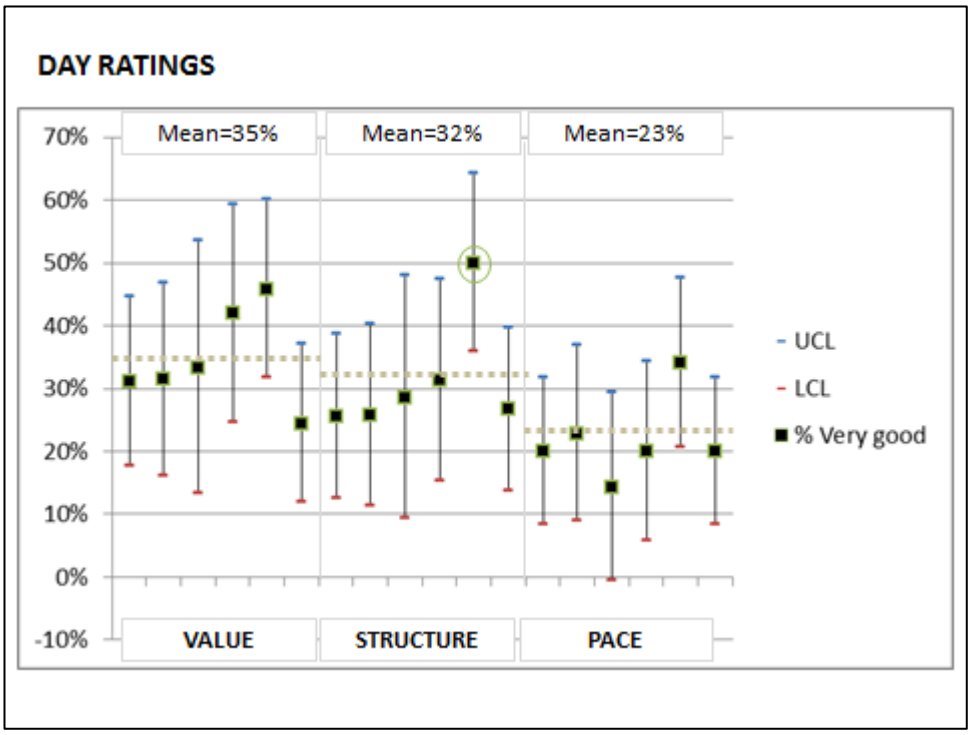


Figure 65: Value, structure and pace analysis (February 2018 cohort)

A few patterns were also evident across the module specific comments (which included those relating to the reflection periods as these were treated as modules in the questionnaires).

- Some modules seemed to be valued for how they triggered important conversations. This again suggested that perceptions of value might be influenced by the team or project context.

- Views were mixed on the value of the adapted reflection based sessions, repeating earlier concerns about being asked to 'reflect on demand'.

- Compared to previous cohorts there were fewer comments about inadequate time for discussions indicating that efforts to free up time through module reductions had been beneficial.

I also undertook a content analysis (Hsieh and Shannon, 2005) of the summary comments for each workshop day similar to that for the 2017 programmes. The resulting themes are shown in Figure 66 ('What worked well') and Figure 67 ('What could be improved').

In Figure 66, 149 comments generated 192 coded items.

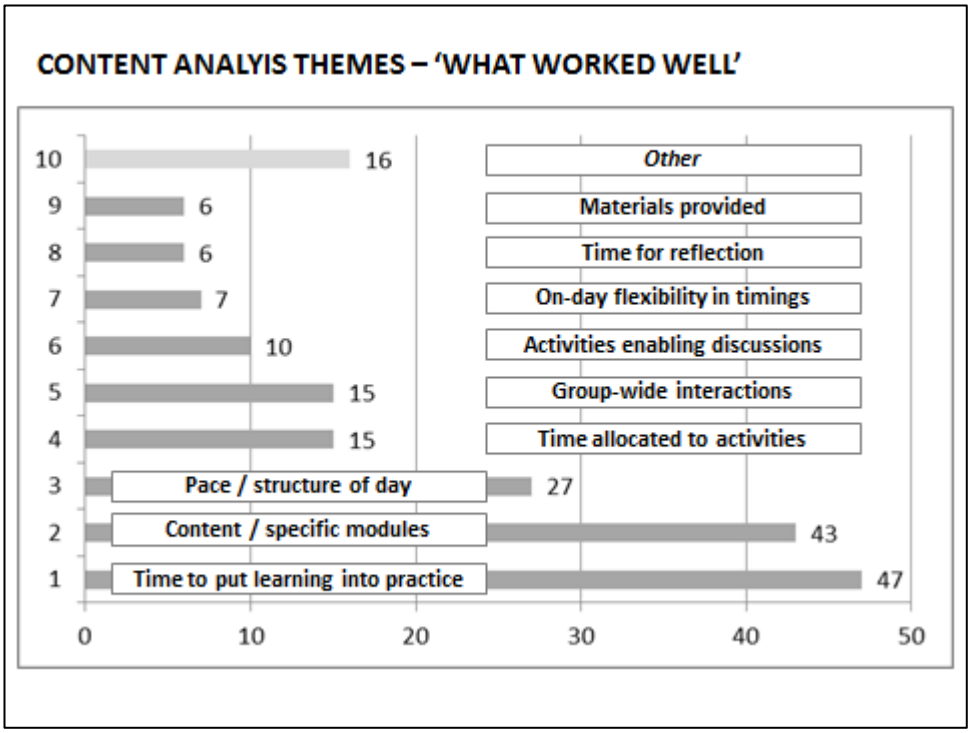


Figure 66: 'What went well' themes (February 2018 cohort)

In Figure 67, 94 comments generated 94 coded items.

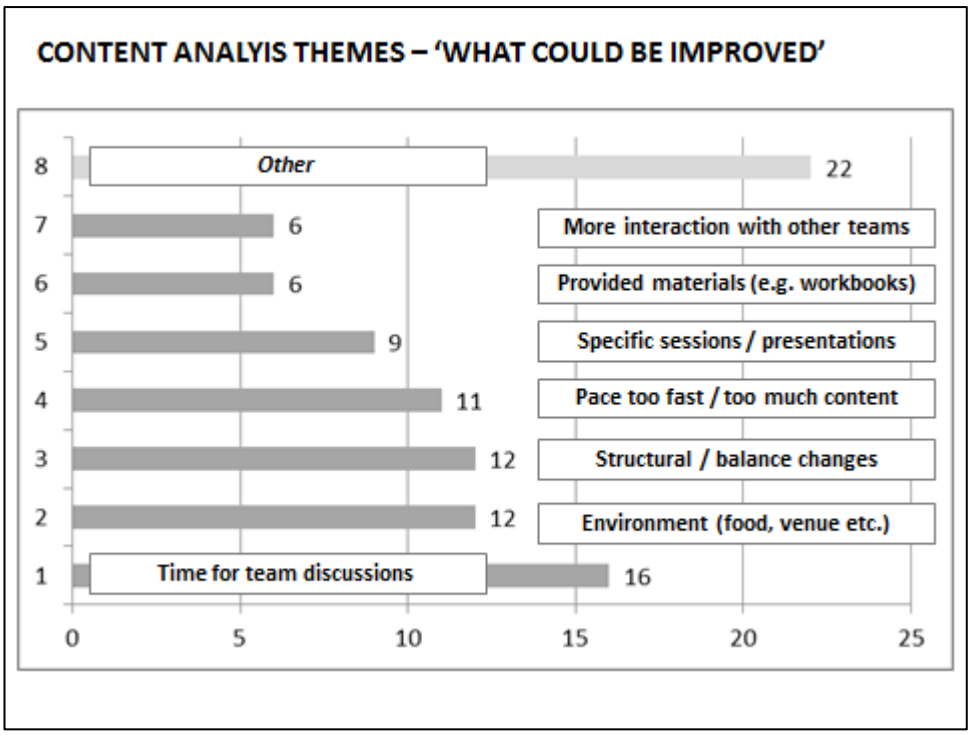


Figure 67: 'What could be improved' themes (February 2018 cohort)

As with the previous cohorts, both sets of comments showed themes related to the time available. Participants valued having time to put learning into practice but wanted more of it, making suggestions about the pace and agendas for the days.

In reflecting on these results it was helpful to compare data between the February 2018 programme and the 2017 programmes as both had used similar questionnaire designs. An approximate comparison was achieved by combining some of the theme categories into higher level groupings and then calculating the number of comments per respondent in order to scale the data appropriately. The results are shown in Figure 68 and Figure 69.

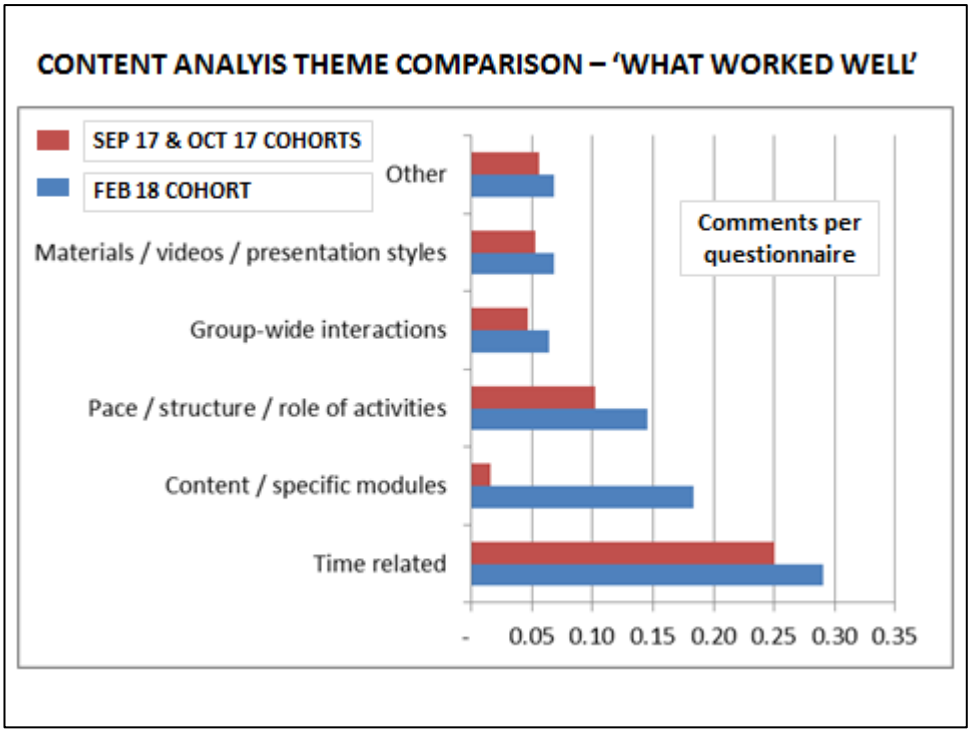


Figure 68: 'What went well' theme comparison

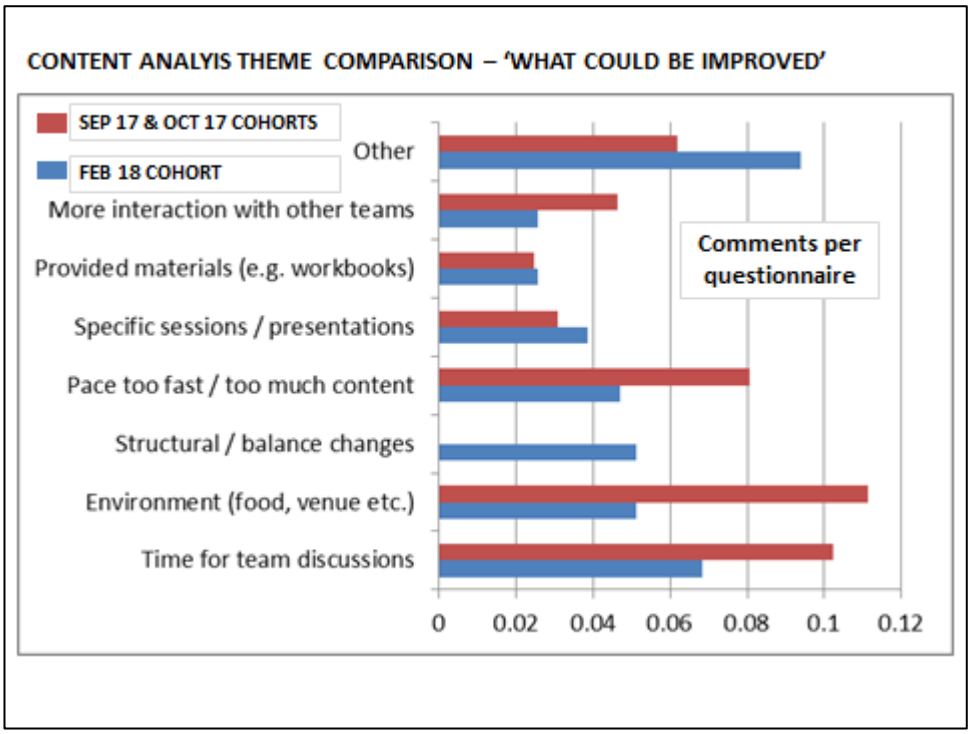


Figure 69: 'What could be improved' theme comparison

This comparison showed that in broad terms the different cohorts identified the same factors with the same frequency for 'what worked well'. The exception was that the February 2018 cohort also made frequent comments about specific modules. This was attributed to differences in how the questionnaire purpose was described to the different cohorts leading to greater efforts by participants in 2018 to give module specific feedback.

For ‘what could be improved’, the frequency of some theme categories varied more between cohorts. From Figure 69 it is evident that time, pace and the desire for more interactions with other teams were still issues for some participants but less than in the previous cohorts. There were however more suggestions being made for structural changes to how the days were designed. In general these commented on faculty choices about how to allocate time between different modules and sessions and were therefore dependent upon participant perceptions about their value.

The faculty undertook after action reviews following the ‘A’ and ‘B’ workshops. In contrast to the 2017 reviews these were not focused upon making mid-programme changes as it was felt that the general TCSL design had been successfully tested in 2017. The ‘C’ workshop review was limited to a post workshop discussion as faculty availability meant that a formal after action review was not possible.

In addition to the feedback results described above, these meetings identified that overall the faculty were pleased with all of the workshops. Modules tended to receive acceptably high ratings and comments were mostly enthusiastic and positive. Although comments were still mixed about the reflection periods, a faculty decision to introduce more flexibility in how these periods were used had seemed to have a positive effect. It also appeared that the 2018 cohort was more engaged than those in 2017 with more participation in plenary discussions. Faculty attributed this to our efforts to better position the purpose of the programme as an opportunity for shared learning and our attempts to work more closely with teams during activities.

One problem identified in the discussions was that there appeared to be a high participant attrition rate between workshops. As similar, if less marked, effects had been observed in previous programmes I offered in my researcher role to facilitate a faculty conversation to identify what we thought might be the causes. Since faculty recognised this to be a multi-faceted problem I captured the suggested hypotheses using an ‘action effect’ format (Reed, McNicholas, Woodcock, Issen and Bell, 2014). This allowed the hypotheses to be grouped under common headings as shown in Figure 70.

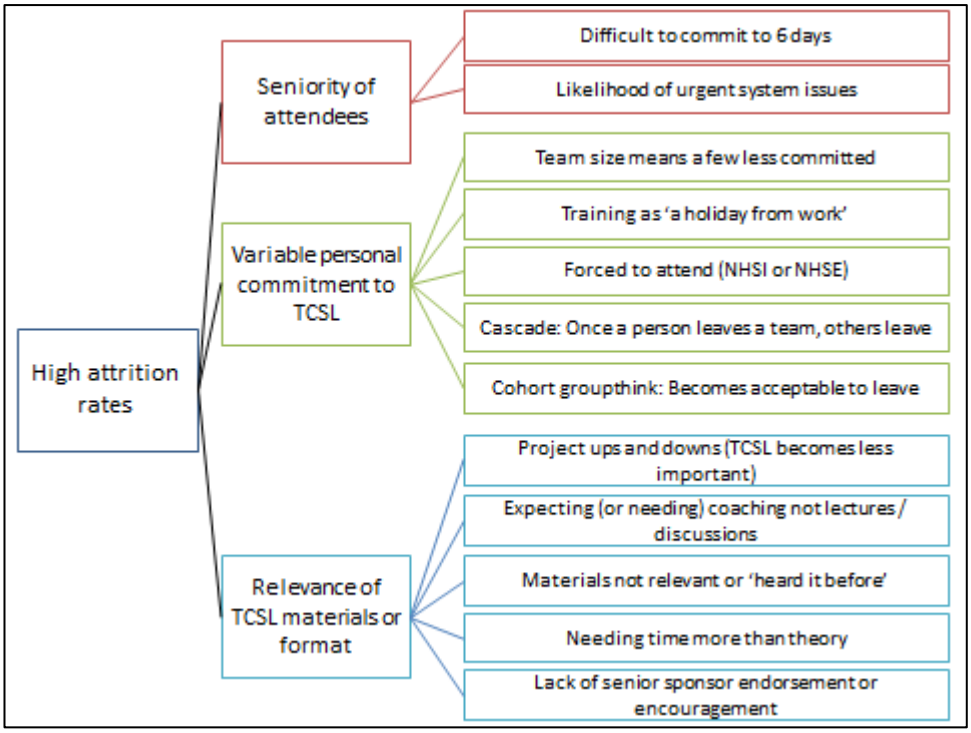


Figure 70: Suggested causes of high participant attrition rates

The hypotheses on the right of Figure 70 predominantly represented contextual factors but some of these were recognised as open to influence by the faculty. For example, if participants were experiencing pressure to attend we could make efforts to identify this in advance and explore with these participants the benefits of the programme to make attendance more voluntary. The faculty also identified a range of potential causes that reflected our learning from participant feedback about the TCSL content and design (shown in blue boxes).

In order to test these hypotheses it was suggested that a future enquiry process should follow up with participants who left mid-programme in order to understand what was influencing this decision.

As part of the design of the February 2018 programme faculty had returned to the question of how to gauge the progress of TCSL participants in adopting the TCSL approaches within their change activities. Historically, understanding how participants were using TCSL concepts, tools and techniques had been hard to gauge since use occurred both inside and outside of the workshops. Research activities, such as the longitudinal case studies described in Section 8.3, had been effective in understanding how a small number of teams had applied their TCSL learning but these required significant time commitments from faculty for interviews and thematic analysis. As a simple way to assess progress, faculty decided to use

the nine factors framework to collect data about the work of the teams as they moved through the programme. Appendix G describes how team assessments against the nine factors were collected in the 'A' workshop and four months later in the 'C' workshop. The factor questions and rating scales are shown in Section 12.1 (Figure 73 to Figure 75).

Figure 71 summarises how the team ratings against the nine factors changed during the programme for the nine teams in the cohort who provided data in both workshops. For each team, each factor was scored between -2 and +2 using a semantic differential scale where two contrasting statements are offered to define the opposing ends of the scale (Teddlie and Tashakkori, 2009). These scores were then summed for the 'A' workshop data and subsequently for the 'C' workshop data. The difference between these sums is shown in Figure 71 for each team and 95% confidence intervals for the differences are calculated using the method described by Gardner and Altman (1989).

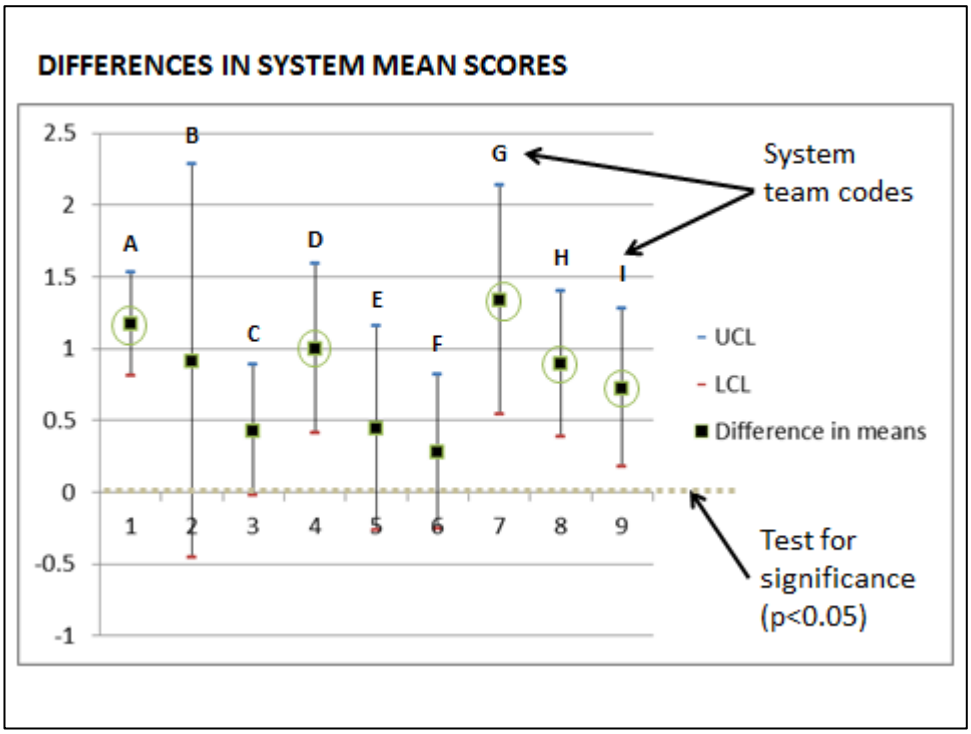


Figure 71: Analysis of changes in total nine factors scores (February 2018 cohort)

This shows that the mean scores across the nine factors improved significantly for five of the teams, with all teams showing a positive change in their mean scores. This result suggested that over the course of the programme most of the teams were adopting the types of actions advocated in TCSL in their systems.

The same data was also analysed for each of the nine factors, this time summing data across the teams at each workshop. Figure 72 shows the difference between the sums for each factor again taking the same statistical approach to creating 95% confidence intervals.

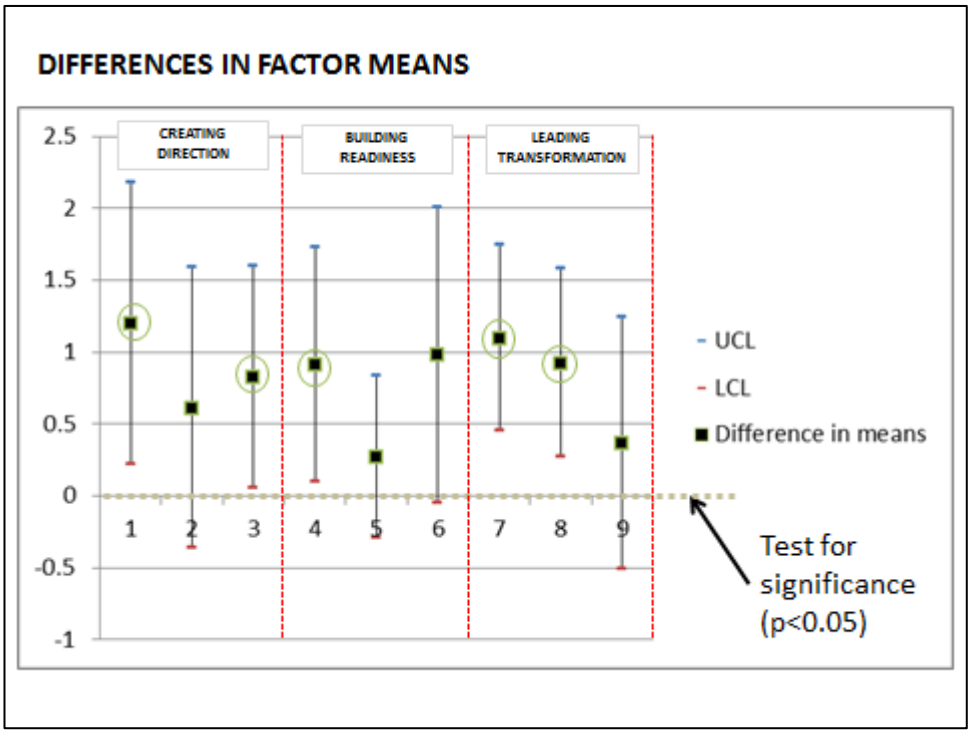


Figure 72: Analysis of changes in each nine factors score (February 2018 cohort)

This analysis indicated to faculty that all factors had on average positively improved with five factors showing significant improvement.

As discussed in Appendix G these results are not definitive proof of the positive impact of the TCSL programme. For example it was not known if all teams were interpreting the factor descriptions and scoring in the same way or how they were generating their composite team ratings. However for faculty the results did at least suggest that for this cohort the programme was leading to changes in practice in line with our expectations.

11.4 Reflections on this phase

This phase was based upon two AR cycles that built upon previous action and enquiry to create, deliver and evaluate three team programmes.

These cycles also represented the influence and culmination of a range of enquiry driven activities. The sharing of faculty's views on TCSL content (Section 8.1) and a faculty

questionnaire process in Cycle 1 again supported activities to create and revise programme content (Cycle 4). The learning from the chief executive interviews (Section 8.2) and longitudinal case studies (Section 8.3) were incorporated into a TCSL module (Cycle 4).

For faculty their increasing desire to show how transformation relied on the integrated use of TCSL content led to the development and publication of a new guide to transformational change (Cycle 4, Section 12.2). Developing this publication led to personal learning as my use of a constraint driven process prompted detailed reflections on the TCSL knowledge domains. TCSL content was also brought together through the development of a new definition of transformational change (Section 12.3) that went on to feature in a module (Cycle 5). Further, the phase saw an increased emphasis on the nine factors framework (updated in Section 12.1) so that it became part of a narrative arc linking the first and last workshops in team programmes. In Cycle 5 this also generated data potentially indicating that teams were adopting TCSL content in their change practice over the course of our programmes.

This phase was also a time of learning. The problems encountered in Cycle 1 led to a focus on uncovering design constraints in Cycle 4. This helped to identify a new polarity impacting upon programme design that related to the interplay of learning, practice and reflection. Faculty also experimented with their own learning processes. Participant interviews were introduced in Cycle 5 in response to a faculty request for more detailed participant perspectives. In addition, after action review methods were introduced in Cycle 4, aiding faculty in adapting programme designs mid-programme.

The use of the structured after action review process was intended to help faculty focus on their expectations about specific programmes, remaining rooted in current experiences. In reality, faculty also chose to retain the flexibility to draw upon their experiences of previous programmes. For example, in Cycle 5 the review process focused on the on-going problem of high participant attrition rates. This mixture of contemporary and historic perspectives could be considered as a consequence of a tension between formative evaluation and the developmental evaluation described by Patton (2011). In the former, evaluative processes are underpinned by a model that describes how a programme achieves its desired outcomes and thus fits neatly within an after action review framework focused on expectations. In the latter that model is viewed as still evolving, often in response to a changing context. For faculty, TCSL programmes sat somewhere between these two perspectives. Our programme designs reflected a model based on agreed design principles and a set of knowledge domains.

Yet we also recognised that our programmes were constantly evolving both in response to our growing knowledge about transformational practice and changes in the NHS context.

This phase also represented a conclusion to this research. More than other phases it brought together the evolution of TCSL programme designs and the knowledge generated through the enquiries of Chapter 8. Early faculty views on TCSL content and form expressed in Section 8.1 took shape as new modules, programme designs and ways of supporting participant learning. Similarly, the chief executive interviews and longitudinal case studies (Section 8.2 and 8.3) went beyond influencing faculty perspectives to also become embedded in TCSL programmes as part of a module.

12 Enquiry cycles used to expand the boundaries of knowledge

In Chapter 7 the metaphor of a clock was used to portray how small AR cycles can exist within larger processes of action and enquiry when applied to elements of a project. This chapter describes some of these smaller cycles, extracting them from the flow of earlier chapters to provide more depth.

The three cycles introduced here also share some common features. Each focused on the development and testing of products used in the TCSL programmes. By their nature these products represented attempt to expand the boundaries of knowledge about transformational change, seeking to understand and describe its concepts in new ways. Each cycle also included significant aspects of first person action research, typically enquiring into my own understanding of transformation and using my own critical thinking to reach new insights.

These cycles described activities to

- update the nine factors framework by developing a personal model of transformational change,
- create a short guide to transformational change, and
- co-construct a definition of transformational change with other faculty members.

Like earlier chapters the narrative for these cycles follows the stages of the AR process, again accepting that the boundaries between these stages were at times blurred due to the iterative and emergent nature of real world research.

12.1 Updating the nine factors framework - a personal model of transformational change

12.1.1 Constructing

This cycle was embedded within Cycle 4 where it had been identified that the faculty wanted to use the nine factors framework as a taxonomy of the action areas required in transformational change.

The framework had originally emerged as a faculty sense-making of the diverse literature described in Section 4.1. It was therefore recognised as lacking the necessary theoretical underpinning to ensure that each factor could legitimately be described as a unique category. Doubt also existed about whether it represented a comprehensive taxonomy. This cycle therefore sought to provide such a foundation and in the process refine the content of the nine factors framework.

In its eventual updated form the nine factors framework is shown in Figure 73 to Figure 75 (based upon Singfield, 2017). Like the original, it is split into three sets of factors, each containing three elements. The nine elements seek to describe different aspects of action required in transformational change. The figures also show the updated questionnaire format based on the nine factors where each factor is represented by a question accompanied by a semantic differential scale. The statements forming these scales represent good and poor practices. They are primarily drawn from faculty experiences of working with systems undergoing change to represent the types of action typically associated with each factor.

In TCSL programmes participants are introduced to the nine factors framework and are then provided with the questionnaire to promote discussions. In Cycle 5 the questionnaire also became the basis for a measure of team progress (as described in Appendix G).

This cycle therefore also incorporated updating the questionnaire alongside the core factors in the framework.

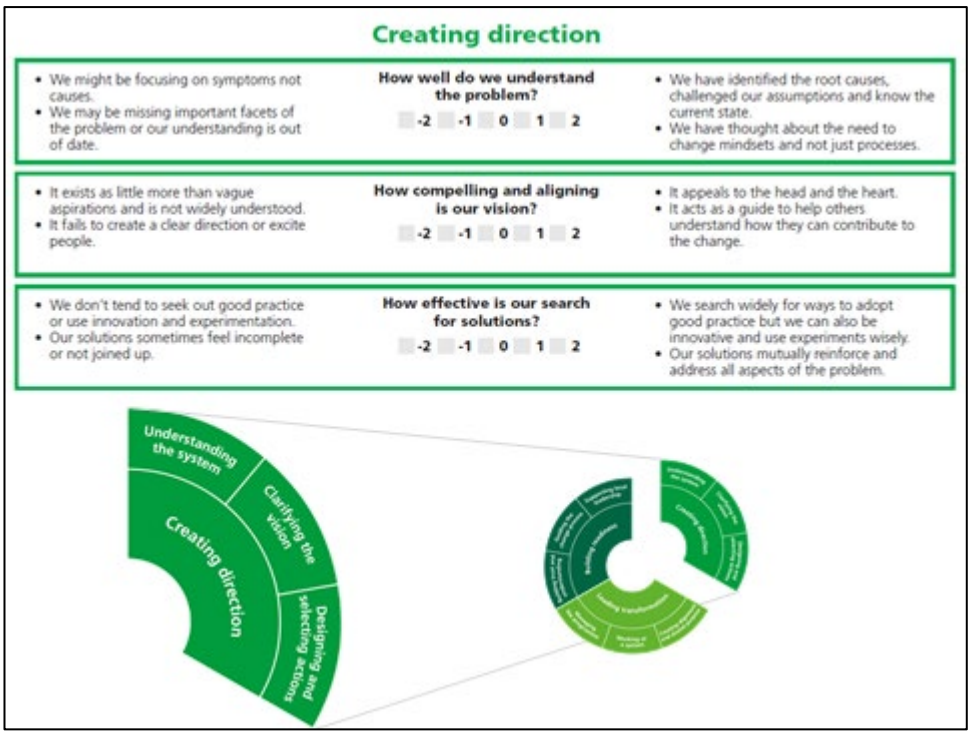


Figure 73: The 'creating direction' questionnaire elements

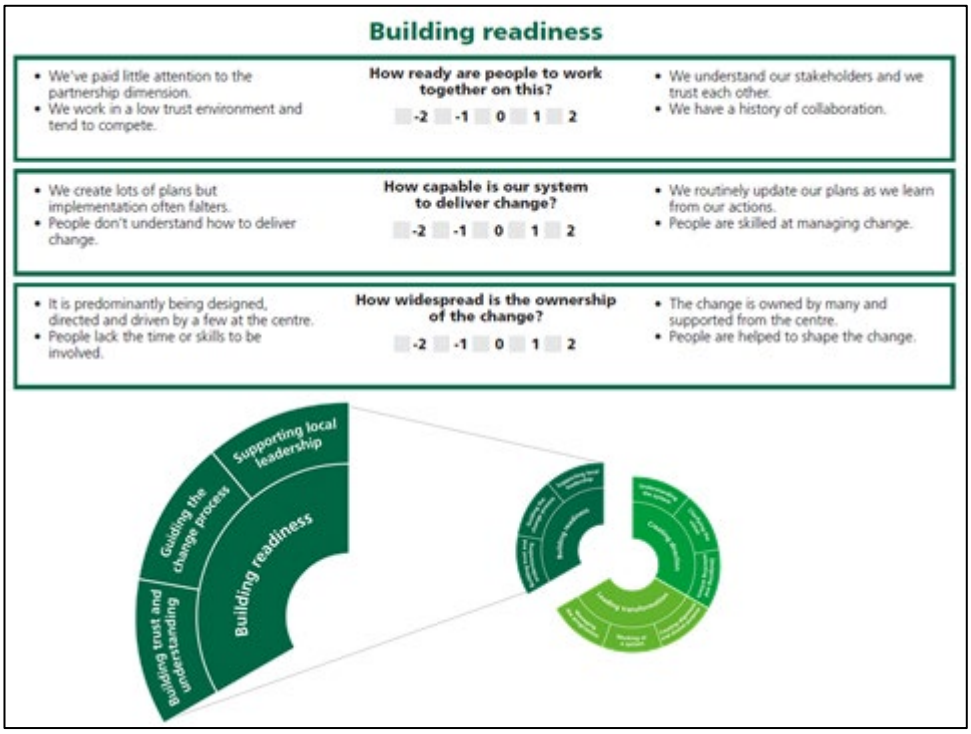


Figure 74: The 'building readiness' questionnaire elements

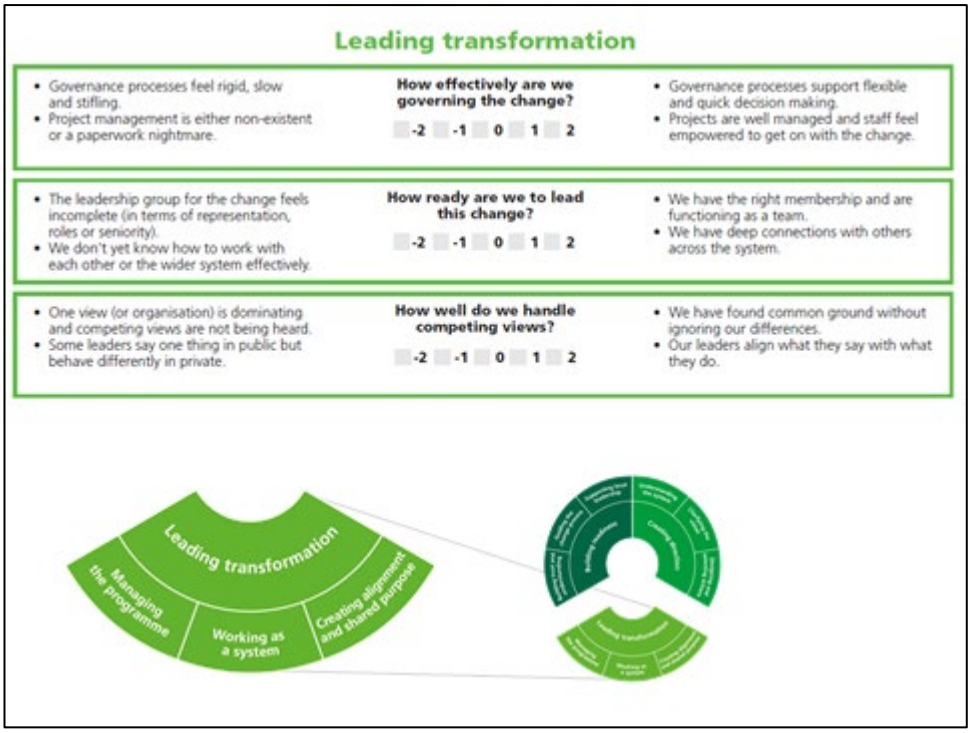


Figure 75: The 'leading transformation' questionnaire elements

The task of providing a foundation for the nine factors was recognised as a significant challenge. Since the factors had arisen from discussion of the professional knowledge of faculty members the obvious solution was to create a formal synthesis of the academic literature to support this knowledge. However, the faculty members' knowledge had been used originally because of the difficulties associated with creating such a synthesis as discussed in Section 4.1.

As an alternative I suggested that it might be possible to underpin the nine factors by using their action oriented nature as a route to uniquely categorising them. This would involve creating a generic transformational change model that was separate from the nine factors framework. This would explicitly incorporate the salient features of real-world complex systems as environmental constraints on the model. The actions identified within such a model could then form the basis of action categories that would be mapped against the nine factors and used to differentiate them from each other. In this way the validity of this change model as a response to real-world environments would support the validity of the nine factors. Also as shown earlier as Figure 50, the nine factors framework was ultimately serving as a mechanism for TCSL participants to develop their own models or sets of practices to guide their transformational changes. Therefore having a generic model underpinning the nine factors would also serve to indirectly underpin their models or chosen practices.

I also believed that such a model could be created through identifying logical responses to the real-world environmental features without detailed reliance on the interpretations supplied in the academic literature. This would create basic action categories at a high level of abstraction but hopefully with sufficient detail to incorporate and differentiate between the descriptions of the nine factors.

The choice to develop a change model rather than adopt one from elsewhere was driven by the diversity described in Section 4.1 which meant that there were no obvious candidates for a generic action oriented model. In the NHS the most frequently cited model of large scale change is the one by Bevan, Plsek and Winstanley (2013) shown in Figure 76. This describes transformation as arising from ever increasing cycles of engagement and pragmatic change. However, faculty members perceived this model as having a number of weaknesses that made it inappropriate as a basis for our nine factors framework. For example it makes no mention of seeking system understanding, an activity common to real world change programmes. It also does not consider who is leading the change process or how decisions about action are made. Similarly, it implies that change processes stop once they fail to attract additional involvement, ignoring the on-going work by those already involved.

It was therefore recognised that not only was the development of a new change model necessary for the purposes of this cycle, it could also potentially offer wider insights into the processes and nature of transformational change.

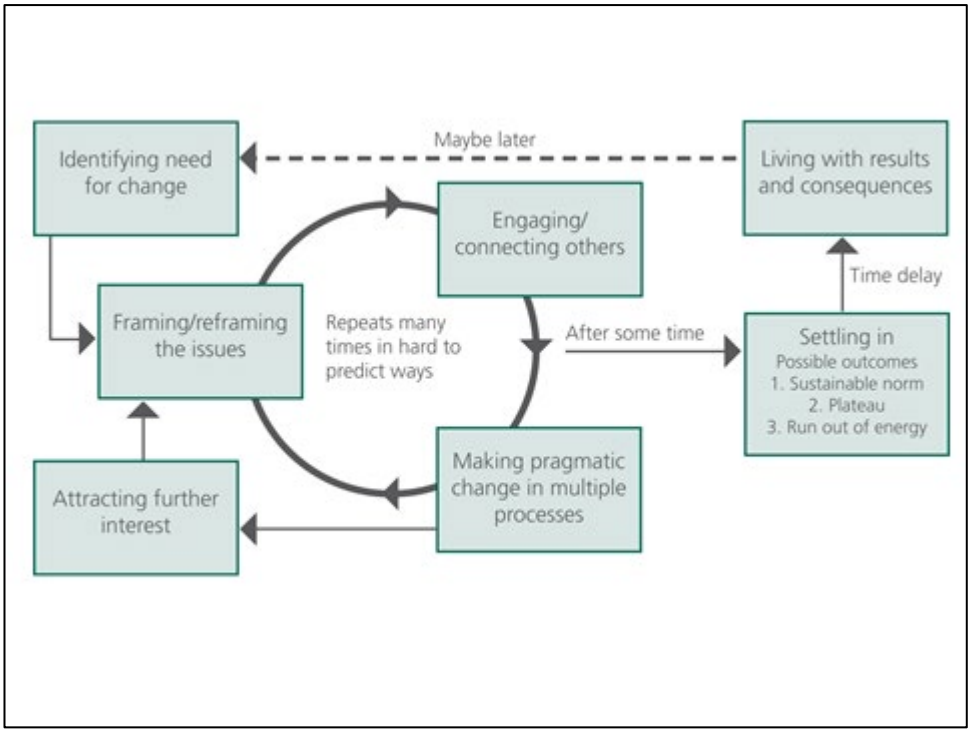


Figure 76: A model of large scale change

12.1.2 Planning action

Due to capacity constraints I agreed to lead this work on the nine factors framework on behalf of the faculty. This entailed personally developing the transformational change model and using it to review and revise the nine factors framework.

Developing the change model independently of other faculty members was also a pragmatic decision. I recognised that for the model to be independent of the nine factors and unbiased by the interpretations imposed by the change literature, it had to be created through a logical and incremental process. If the model took on the status of a 'faculty model of change' it would have been tempting to try and incorporate our different professional perspectives, negating its role in challenging the structure and content of the nine factors. Working on this independently I could more easily explore and critique my own thinking to ensure a rigour and logic to the model's evolution. Also, since the model was being developed at a high level of abstraction it did not require insights derived from the faculty members' professional experiences. Their involvement could therefore be reserved for later in the process to challenge any eventual refinements to the nine factors descriptions. In this way, the faculty provided a check and balance to any bias that I might introduce into the review process whilst also ensuring the nine factors remained true to their knowledge of change practices.

Action was therefore planned as two phases.

- In the first, I would develop the transformational change model. I determined that I would do this as an evolutionary process that would start from a simplified change scenario and gradually add in real world considerations. I reasoned that such an approach would allow different (and unique) action types to be identified with each clearly linked to a rationale for action.

- In the second, I planned to map the final change model against the existing nine factors framework and modify the framework and factor descriptions accordingly. These modifications would then be tested with faculty members to ensure that the framework still aligned with their professional views. The resulting framework and descriptions would then be further tested through their inclusion in TCSL programmes from May 2017.

To support the development of the model I identified five validity criteria that I would apply throughout its evolution.

- The model should address the aspects of transformational change that are typically used to differentiate it from other kinds of change (e.g. multiple goals, a mixture of central and distributed control, uncertainty about cause and effect etc.).

- It should offer guidance on the type of actions required of those leading change and where relevant the sequencing or connections between those actions.

- It should be capable of describing or containing other models of transformation that are viewed by others as having some validity (i.e. contain the elements seen in other models).

- It had to encompass the types of real world actions known to occur in change programmes.

- In the limit where system complexity disappears (i.e. in a predictable system), it should reflect more traditional linear models of change.

These criteria served to ensure that the change model would be realistic, action oriented, in keeping with existing theories and practices of change and helpful in bridging the divide between TCSL content and more traditional 'mechanical' change models. This final point also

represented a personal aspiration to develop greater understanding of the different paradigms introduced in Chapter 2.

12.1.3 Taking action and evaluating

My development of the transformational change model occurred through a series of reflective steps that saw it evolve across the stages outlined in Appendix C. These steps explored the logic within each stage and ensured that all action categories could be clearly articulated and differentiated from each other. Reflection also involved moving back and forth between the emerging model and my understanding of real world change practice to ensure that the causes of these practices were incorporated as realistic environmental constraints in the model.

The model began with the simple scenario shown in Figure 77.

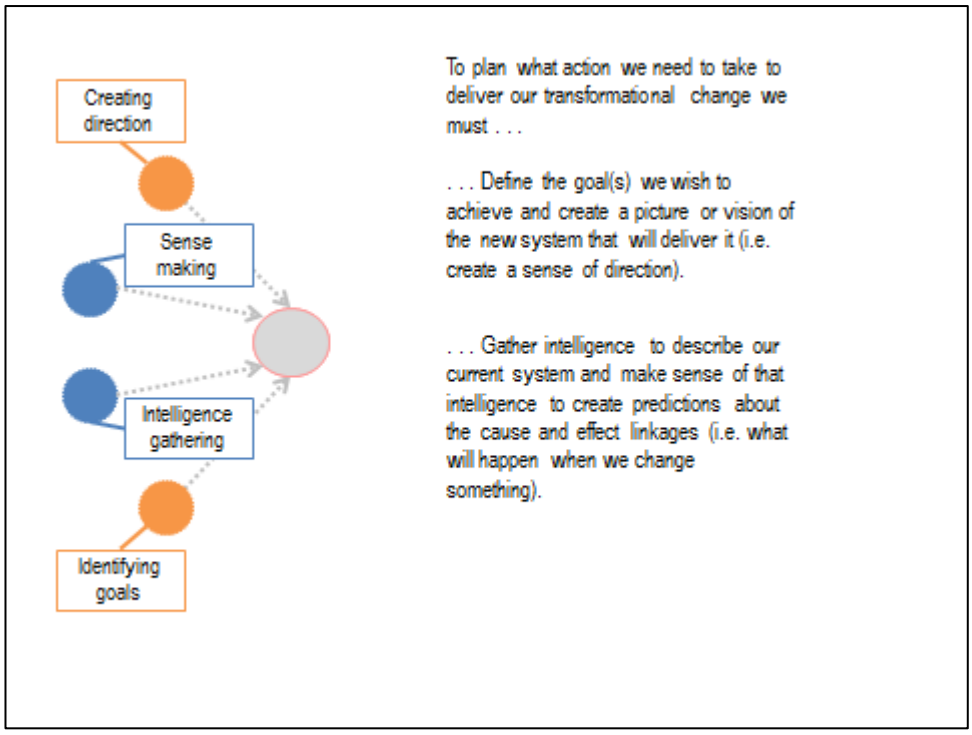


Figure 77: Initial change scenario

In this idealised scenario it is assumed that there is just one person involved in the change process, they are able to have complete and perfect knowledge of their system, they can define a single future state where their change goal is achieved and have no restrictions on the actions they can take. This scenario therefore represents the archetypal 'mechanical' depiction of change (i.e. complete knowledge and control).

In Appendix C this scenario is gradually added to in a number of ways. For example

- introducing the need to choose between different ways to reach a change goal (or the potential for having no viable options for reaching the goal);
- allowing for imperfect implementations of actions (i.e. failure to meet the goal) or imperfect knowledge of cause and effect to predict the impact of actions;
- having multiple change goals and multiple decision makers;
- differentiating between actions that move a system towards a goal and those that act to enable other changes (e.g. gathering resources);
- introducing the need to manage the change processes; and
- differentiating between those with formal change leadership roles and others who also take change related actions.

In Appendix C these refinements serve to gradually introduce real world factors including multiple sources of change complexity. This ultimately leads to the full transformational change model shown in Figure 78.

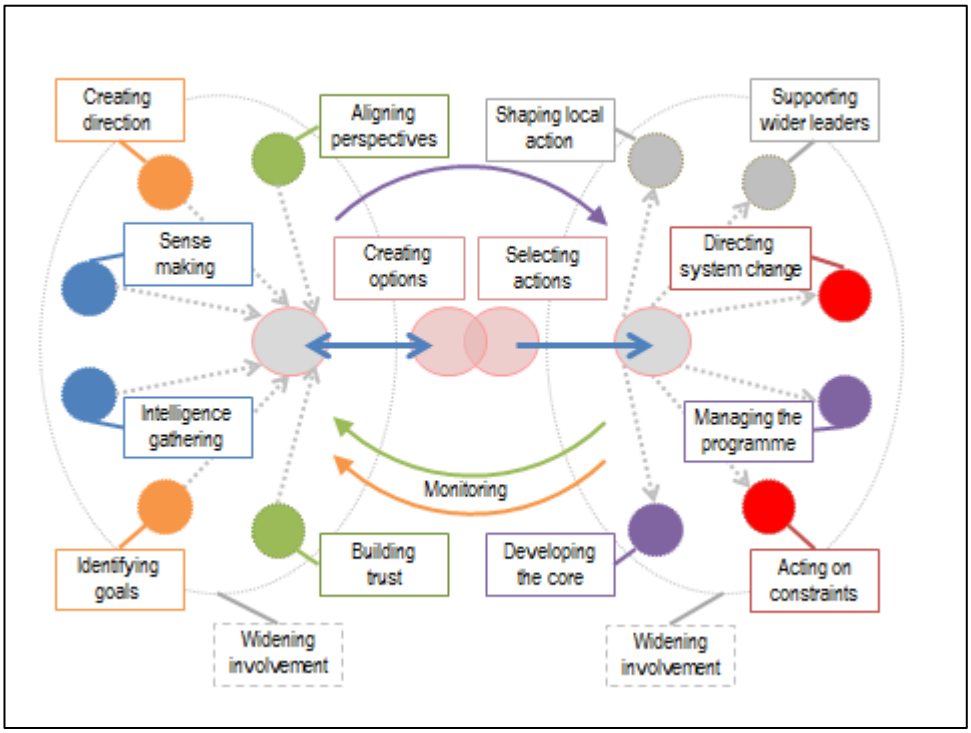


Figure 78: The transformational change model

This model contains 14 action categories and two types of monitoring feedback loop (to review individual actions and understand the impact on the system as a whole). Its construction focuses on the role of a 'core' group of change leaders who have authority to

lead a change programme (similar to participants in TCSL programmes). However, it also includes actions undertaken by others involved in change processes (i.e. incorporating a distributed leadership perspective where action can occur outside of formal lines of control). In the figure and in Appendix C, colour coding indicates action types that have similarities or exist in a close relationship with each other.

Although the change model started from a series of 'mechanical' assumptions, its eventual form incorporates various aspects of complexity. This means that the result of any action cannot be fully predicted. This creates a cyclical aspect to the model where any action category (on the left or right) can theoretically be revisited during a change process. To better illustrate this cyclical, complexity oriented view, an alternative representation of the model is shown in Figure 79 emphasising the action categories and feedback loops.

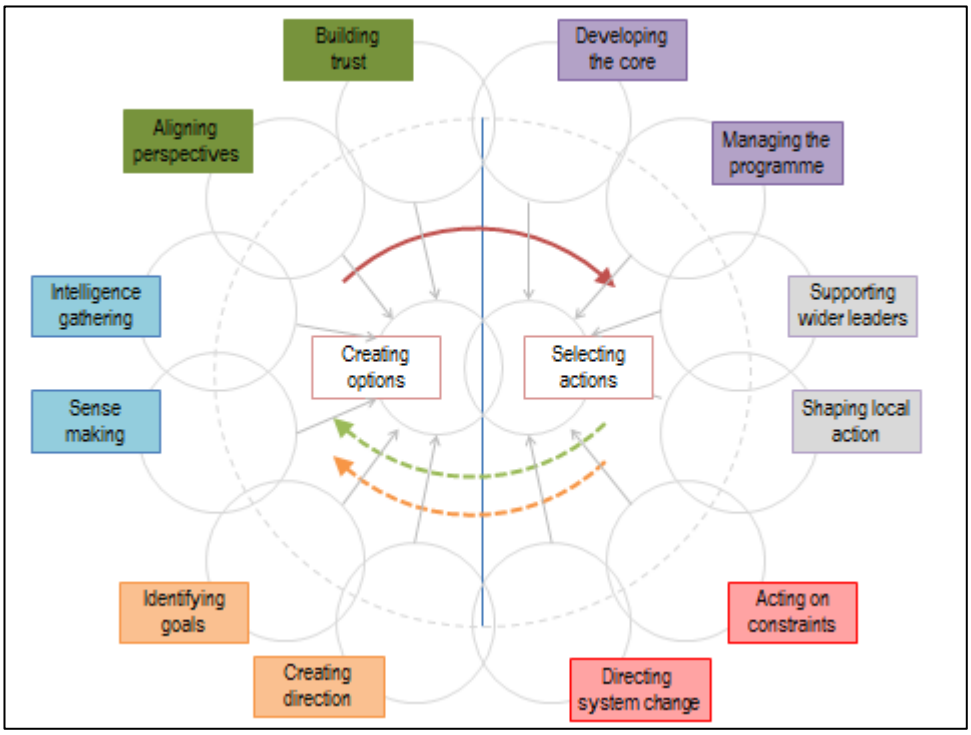


Figure 79: An alternative presentation of the transformational change model

Taken to the extreme, Figure 79 suggests that the highly cyclical process of transformational change leadership involves an on-going, moment by moment, process of choosing between all of the action categories shown. This choice of 'what next?' occurs in response to the emerging system context and the knowledge that a change leader has of their system. Figure 79 therefore replaces the mechanical model of change with something more emergent, contextual and based upon a leader's evolving hypotheses about how to move a change process forward.

The model shown in Figure 78 and the thinking underpinning Appendix C supported the second phase of the work in this cycle as they became the basis for reviewing the nine factors framework.

To undertake this review, descriptions of each action category (and the feedback processes in the model) were mapped against the existing descriptions of the nine factors. This allowed them to be allocated across the nine factors, resulting in each factor having 1-3 elements of Figure 78 associated with it. Typically this reflected the colour coding shown in the figures. These elements were then used to slightly modify the title of the factor and its associated descriptions to align the factor with the change model content. This created the revised nine factors shown earlier in Figure 73 to Figure 75. In an additional step to help confirm the completeness of the model and the mapping process, the core content of the TCSL knowledge domains was also mapped against the revised nine factors. This helped to ensure that there were no aspects of TCSL taught content that fell outside of the model or framework.

To validate the revised nine factors and descriptions, feedback was sought from two other faculty members. They were provided with details of the transformational change model, the mapping of its elements to the framework, the proposals for the revised framework and descriptions and the mapping of the knowledge domains. Their feedback supported the revised framework. They judged it to still be a good reflection of their professional views on transformational change. The only suggested modification was to incorporate an emphasis on the personal leadership required in transformational change which was accommodated by placing 'personal leadership' at the heart of the illustration of the nine factors framework as is shown in Figure 80.

Figure 80: The nine factors framework and knowledge domain icons

Overall this cycle combined a personal reflective exploration of transformational change with the engagement of the faculty to agree revisions to the nine factors framework. In general it was successful, resulting in faculty agreement to the revised nine factors framework and confidence that this framework could be used to articulate the full range of actions involved in transformation.

The cycle involved a number of choices on my part.

- The original choice to develop a model as the foundation of the nine factors appeared justified. An action based model forced a focus on differentiating and justifying the actions seen in change which in turn helped to define the relationships between the nine factors.

- The use of a strict set of validity criteria in the development of the model had helped in ensuring it was both comprehensive and realistic.

- The decision not to involve faculty in the development of the model had the anticipated drawback of lower ownership of the model but did not inhibit their endorsement of the revised nine factors. By sharing with them the model and details of the mapping used to revise the nine factors, faculty were able to form a judgement of the adequacy of the processes used to revise the nine factors.

At a personal level, this cycle led to significant learning for me.

- It clarified my thinking about the types of activities required in transformational change, helping me to consider the rationale behind the actions I observed in systems undergoing change. It therefore built upon my own professional practice.

- It prompted me to reformulate my view of transformational change processes. The iterative movement between the two halves of Figure 78 made me conceptualise transformation as the on-going, moment by moment choice between the full range of actions seen in the figure, moving away from more linear processes characterised by well-defined steps or stages.

- It allowed me to create a model that incorporated both the 'mechanical' approach to change and a more complexity driven perspective, clarifying the aspects of context that differentiate the two approaches. This gave me further understanding of the paradox described in Section 4.1.

- It supported my emerging thinking about transformational change and complexity (as is expanded upon in Appendix C), in particular helping me to develop a new way to describe how complexity arises.

In my development of the transformational change model there were also some aspects that I reflect on as incomplete or in some way unsatisfactory.

- The action area of 'building trust' is under-developed. As a category it collates together a range of relationship building activities that support joint working. These could potentially be further disaggregated or explored in different ways (as indicated in Section 8.3, Figure 44). Further work could also be done to incorporate learning from other sources, for example the comments about trust made in the chief executive interviews in Section 8.2.

- 'Widening involvement' appears in Figure 78 in recognition that most actions are not limited just to the 'core' and need to be influenced by 'wider leaders' (e.g. distributed leaders). This porous boundary between core leadership and others could be explored further to better differentiate these groups and the action sets associated with them.

- As yet the decision making process at the centre of Figure 78 is under-developed. More consideration could be given to empirical or theoretical perspectives on decision making in change processes. This might serve to highlight further connections between action categories.

The new transformational change model also has the potential to be developed and used further, both to enhance TCSL programmes and further extend the boundaries of knowledge about transformational change. For example, Figure 81 shows how the 'large scale change model' (Figure 76) can be re-presented by focusing on selected elements of the transformational change model (retained as bold circles). Representations such as this could in the future help to position other models of change and explore the assumptions or contextual requirements underpinning them.

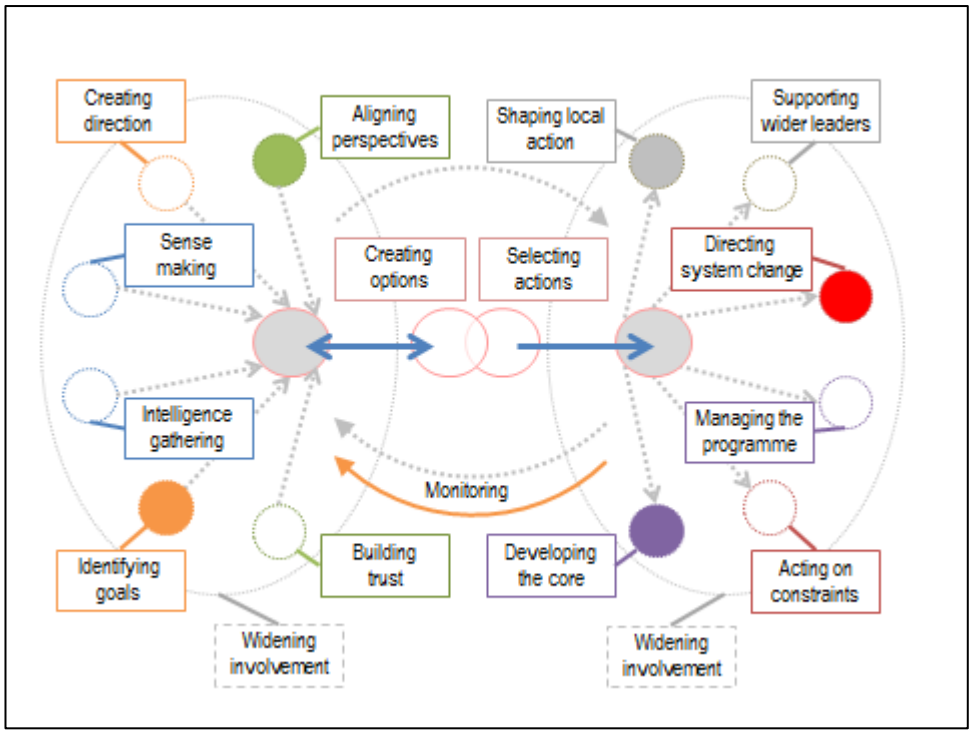


Figure 81: Identifying elements present in another change model

12.2 Developing a guide to transformational change

12.2.1 Constructing

This cycle formed part of Cycle 4 and was used to develop a short guide to transformational change.

In Phase II the extended nature of the TCSL programmes meant that faculty wanted to provide materials that would serve as a summary of the main TCSL content. As discussed in Cycle 4 (and illustrated in the learning process shown in Figure 54) these were intended to help participants develop early action plans that would take account of the full range of TCSL content before participants had experienced all of the programmes modules.

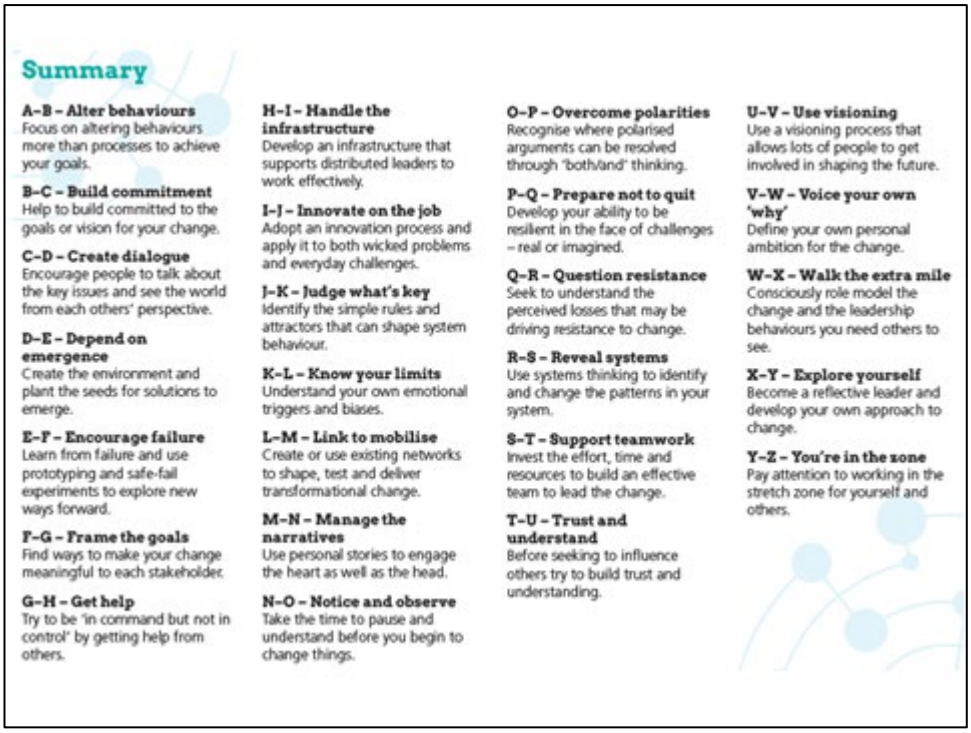
In discussion with the faculty it was agreed that I would develop a short guide that would seek to encompass the core concepts introduced within the TCSL knowledge domains. This would be provided to participants at the start of TCSL programmes to help them contextualise their actions. To maintain a coherent product it was proposed that the guide would be developed by me and then reviewed by other faculty members to ensure it aligned with their views on the TCSL content. It was also proposed that an initial version of the guide would be tested with TCSL participants as part of a programme.

Initial conversations about the guide with faculty members suggested that it needed to combine the attributes of being succinct, informative and engaging. This presented a number of challenges. To be succinct such a document would need to prioritise within the TCSL content or find ways to convey key messages briefly. This content had to however remain informative, ensuring it provided a recognisable and helpful representation of the knowledge domains that reinforced their connectivity. To be engaging, it would also need to distil this content into easily digestible chunks using language that could be readily interpreted without the additional detail provided in TCSL modules.

As a piece of first person AR the prospect of developing such a guide was attractive. I recognised it as an opportunity to challenge my own thinking about the TCSL content in a way that would force me to identify what I believed to be the key concepts within TCSL. Moreover, in doing so I hoped I would find further helpful connections within the TCSL content and new ways to articulate that content.

12.2.2 Planning action

My suggestion to faculty was that I develop a publication based upon the concept of an 'A-Z of transformational change'. In this format our description of TCSL content would be limited to 25 areas of practice represented by pairs of words following a strict naming convention. The format is evident in Figure 82 that shows the eventual word pairs selected. Figure 83 shows an example of the more detailed descriptions accompanying each of the pairs. Both figures are extracts from the final publication (ACT Academy, 2017).



Summary

A–B – Alter behaviours
Focus on altering behaviours more than processes to achieve your goals.

B–C – Build commitment
Help to build committed to the goals or vision for your change.

C–D – Create dialogue
Encourage people to talk about the key issues and see the world from each others' perspective.

D–E – Depend on emergence
Create the environment and plant the seeds for solutions to emerge.

E–F – Encourage failure
Learn from failure and use prototyping and safe-fail experiments to explore new ways forward.

F–G – Frame the goals
Find ways to make your change meaningful to each stakeholder.

G–H – Get help
Try to be 'in command but not in control' by getting help from others.

H–I – Handle the infrastructure
Develop an infrastructure that supports distributed leaders to work effectively.

I–J – Innovate on the job
Adopt an innovation process and apply it to both wicked problems and everyday challenges.

J–K – Judge what's key
Identify the simple rules and attractors that can shape system behaviour.

K–L – Know your limits
Understand your own emotional triggers and biases.

L–M – Link to mobilise
Create or use existing networks to shape, test and deliver transformational change.

M–N – Manage the narratives
Use personal stories to engage the heart as well as the head.

N–O – Notice and observe
Take the time to pause and understand before you begin to change things.

O–P – Overcome polarities
Recognise where polarised arguments can be resolved through 'both/and' thinking.

P–Q – Prepare not to quit
Develop your ability to be resilient in the face of challenges – real or imagined.

Q–R – Question resistance
Seek to understand the perceived losses that may be driving resistance to change.

R–S – Reveal systems
Use systems thinking to identify and change the patterns in your system.

S–T – Support teamwork
Invest the effort, time and resources to build an effective team to lead the change.

T–U – Trust and understand
Before seeking to influence others try to build trust and understanding.

U–V – Use visioning
Use a visioning process that allows lots of people to get involved in shaping the future.

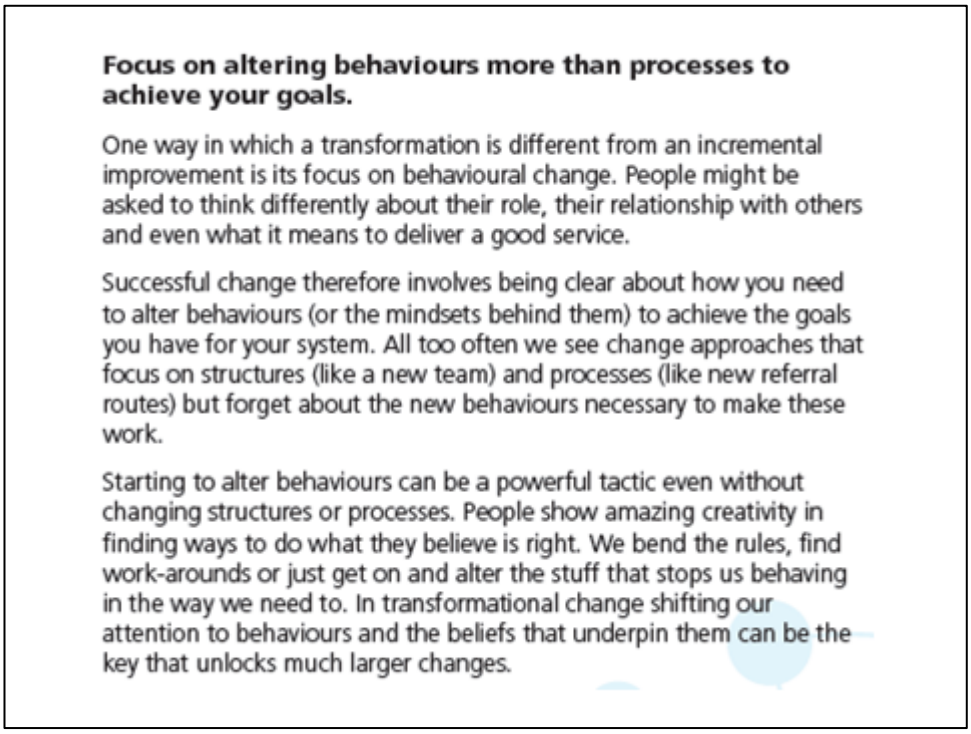
V–W – Voice your own 'why'
Define your own personal ambition for the change.

W–X – Walk the extra mile
Consciously role model the change and the leadership behaviours you need others to see.

X–Y – Explore yourself
Become a reflective leader and develop your own approach to change.

Y–Z – You're in the zone
Pay attention to working in the stretch zone for yourself and others.

Figure 82: Summary extract from 'The A-Z of transformational change'



Focus on altering behaviours more than processes to achieve your goals.

One way in which a transformation is different from an incremental improvement is its focus on behavioural change. People might be asked to think differently about their role, their relationship with others and even what it means to deliver a good service.

Successful change therefore involves being clear about how you need to alter behaviours (or the mindsets behind them) to achieve the goals you have for your system. All too often we see change approaches that focus on structures (like a new team) and processes (like new referral routes) but forget about the new behaviours necessary to make these work.

Starting to alter behaviours can be a powerful tactic even without changing structures or processes. People show amazing creativity in finding ways to do what they believe is right. We bend the rules, find work-arounds or just get on and alter the stuff that stops us behaving in the way we need to. In transformational change shifting our attention to behaviours and the beliefs that underpin them can be the key that unlocks much larger changes.

Figure 83: Example of a detailed description of the 'A-B' entry

This restrictive format was intended to support the design requirements of being succinct, informative and engaging. More importantly, it also employed the concept of constraints (described in Cycle 4) to force a deeper consideration of what content to include and how that content should be described.

The guide's development was planned around two sequential action and enquiry processes. The first was a personal reflective process as I iteratively developed the A-Z content. The second was the testing of the ultimate product with fellow faculty members and programme participants in order to validate its content and design.

12.2.3 Taking action and evaluating

In the initial development process I had to select the word pairs and create their associated narratives. This iterative task encompassed multiple steps. Initially a review of all TCSL content was used to identify the concepts underpinning different knowledge domains. These were then prioritised by me for their relevance to transformational change and attempts made to fit them within the strict naming convention. However the constraint of a limited number of word pairs and the chosen naming convention forced a wider consideration of which concepts should feature in the guide. Although it was cognitively challenging the constraints based process had various benefits.

- It encouraged me to consider if some TCSL concepts could be grouped together and represented by a single entry. For example, the complexity oriented ideas of 'simple rules' (described in Zimmerman, Lindburg and Plsek, 1998) and 'attractor patterns' (described by Sweeney and Griffiths, 2002) were combined into a single entry of 'Judge what's key' (the 'J-K' entry in the guide). This reframed both elements as aspects of how a leader intervenes to align system change activities. Exploring such groupings encouraged me to think more deeply about the connections between TCSL concepts.

- The limitation of the letter pairs meant I often had to experiment with different ways to phrase concepts. This challenged me to consider how different terms can generate subtly different interpretations. For example, the existence of emergent order in social systems became phrased as 'Depend on emergence' (the 'D-E' entry in the guide). This repositioned emergence as a positive attribute in a change process rather than an inconvenience. So in rewording concepts I also explored my interpretation of them.

- The size restriction aided the prioritisation process. As I rapidly filled the 25 entries, new concepts had to be compared to those already in place to determine if an entry should be replaced. TCSL concepts like 'anti-fragility' (Taleb, 2012) failed to secure a

place in the guide as I reflected on their relative importance in shaping participant change practices.

- The process highlighted for me that some of the core messages I wanted to convey had become under-emphasised in recent TCSL programmes. For example, 'Link to mobilise' ('L-M') was included in the guide as a reference to the important role of networks in major change (as described by Kotter, 2015). Yet this topic had more recently only been given a cursory mention in our programmes. The creation of the guide therefore also aided the on-going detailed design of the programmes.

In the second part of this process the prototype guide was tested with others. This was initially done by sharing a draft with faculty members for comment. This resulted in retaining all of the 25 suggested word pair concepts as these were deemed to be a good representation of the TCSL content. It also led to a suggestion that the accompanying descriptions needed to be shortened to serve as more succinct high level overviews (i.e. removing a perceived barrier to participants reading the guide). This acted as a further constraint, forcing even greater personal awareness of my use of language and the meaning conveyed by each entry. Figure 83 shows one of the resultant shortened descriptions.

The revised guide was then tested as a prototype publication with participants in the September and October 2017 programmes (part of Cycle 4). Generating data about the guide's ability to contextualise early modules in relation to the programme as a whole was recognised as difficult. Any assessment early in the programme would take place without participants having full knowledge of the TCSL content that the guide would be seeking to represent. Later assessment would involve participants trying to recall how the guide helped them contextualise early TCSL content from some months before. In discussion with other faculty members it was agreed that an early assessment could be used if we focused upon participants' perceptions of the relevance of the guide to their change work. In this way, relevance would act as a proxy for the contextualisation we were seeking to achieve.

In the 2017 programmes, all participants (116 people) were provided with a copy of the guide and a feedback questionnaire. Alongside questions about its relevance, participants were asked a variety of questions relating to their views on how well the guide was organised, whether it included enough information, how easy it was to understand and its size and format. A total of 15 items were included in the questionnaire, each rated on a five point Likert scale from 'very poor' to 'very good'. Participants were also asked to comment on what

they found useful and to suggest improvements. As participants needed to read the guide before completing the questionnaire, both were distributed at the first TCSL workshop for each cohort and the anonymised questionnaires were collected at the second workshop. Participants were informed that the guide was a prototype publication and that their views would be used to shape its further development.

The response rate to the questionnaire was low (13%) which may have been due to the delay between distributing the guide and collecting the feedback (i.e. split between the first and second workshops). However, the detailed nature of the questionnaire meant that a range of information was gathered from those who responded. Across all questionnaires, each of the 15 items had 87% to 100% of their ratings as either 'very good' or 'good' with no rating below 'fair' (the mid-point rating). Comments also suggested the guide was both helpful and informative with no suggestions made for improvements. So although the response rate to this questionnaire was low, the feedback indicated a positive reaction to the guide. It was therefore formally adopted as part of the TCSL programme materials.

12.3 Creating the transformational change definition

12.3.1 Constructing

This cycle was undertaken in early 2018 as part of Cycle 5 to create an ACT Academy definition of transformational change. Like the cycle discussed above, this work was primarily undertaken to reinforce the need to view TCSL content as a mutually reinforcing and connected whole.

Historically the ACT Academy had adopted a definition for 'transformation' based upon the large scale change definition used by Bevan, Plsek and Winstanley (2013) shown in Figure 84.

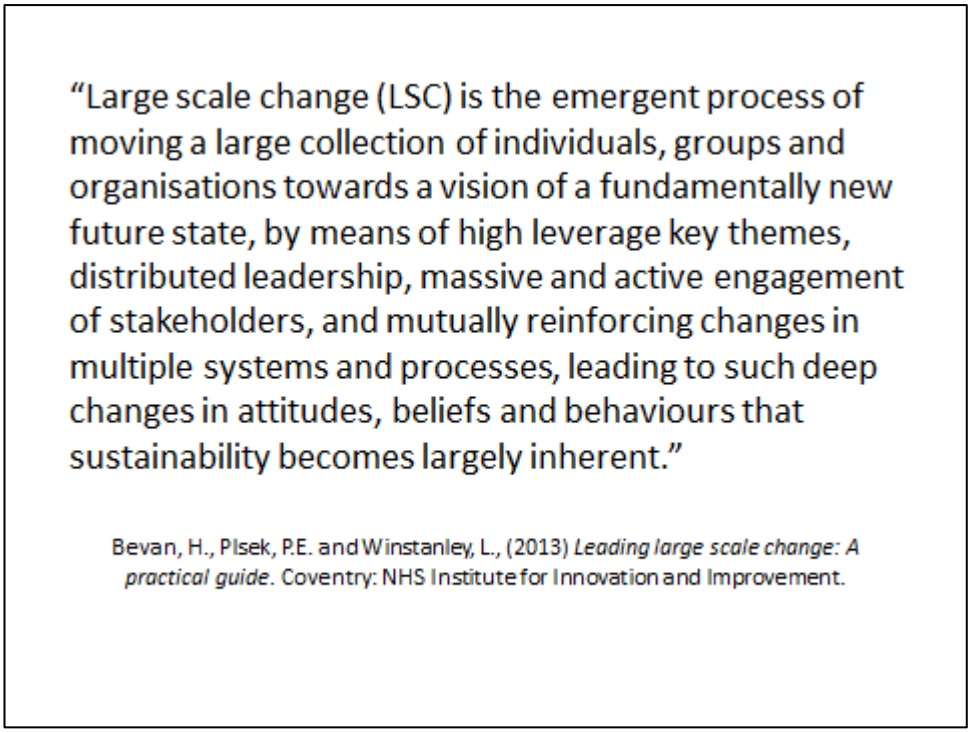


Figure 84: A definition of large scale change

However, as the knowledge domains had increasingly departed from the theory base and models associated with this definition (as described in Section 12.1), the faculty decided that a new ACT Academy definition was required. It was also thought that the process of developing a shared definition would help faculty to expose and reconcile underlying differences in their perspectives about transformation (e.g. building on the discussions on scale described in Cycle 2). Further, as expressed in the early faculty interviews (Section 8.1), a definition would serve as a powerful statement of the ACT Academy's position on transformation, potentially addressing some of the definitional confusion described in Section 4.1.

12.3.2 Planning action

Early discussions with faculty members suggested that a definition needed to emerge from our collective experience and our personal interpretations of TCSL content. However, it was also felt that we should challenge these perspectives by considering other data such as

- the academic literature relating to transformation,
- the enquires described in Chapter 8 , and
- the themes recurring throughout the TCSL programmes.

The development of a collective definition was therefore planned as an iterative process that would start with a sharing of our perspectives. In my researcher role I volunteered to facilitate these discussions and provide the initial stimuli relating to points above.

12.3.3 Taking action and evaluating

In preparation for an initial faculty discussion I developed a set of slides to act as discussion stimuli. The academic literature was outlined in the form of the work of Levy (1986) and Anderson and Anderson (2010) described in Section 4.1. I also introduced the adaptive leadership ideas of Heifetz, Grashow and Linsky (2009) and the 'Five Frames' change model (Keller and Price, 2011) as both had been suggested as models relevant to major change in the NHS. Collectively these perspectives were presented to provide a range of contrasting definitions and concepts prevalent in the academic literature. To link the definition to other enquiries undertaken in this research I also provided my transformational change model (Section 12.1) and the thematic model derived from the longitudinal case studies (Section 8.3). TCSL content was represented by a summary of the major themes that I had identified as recurring throughout our TCSL programmes shown in Figure 85 (drawing upon my own review of TCSL content undertaken to create the guide described earlier).

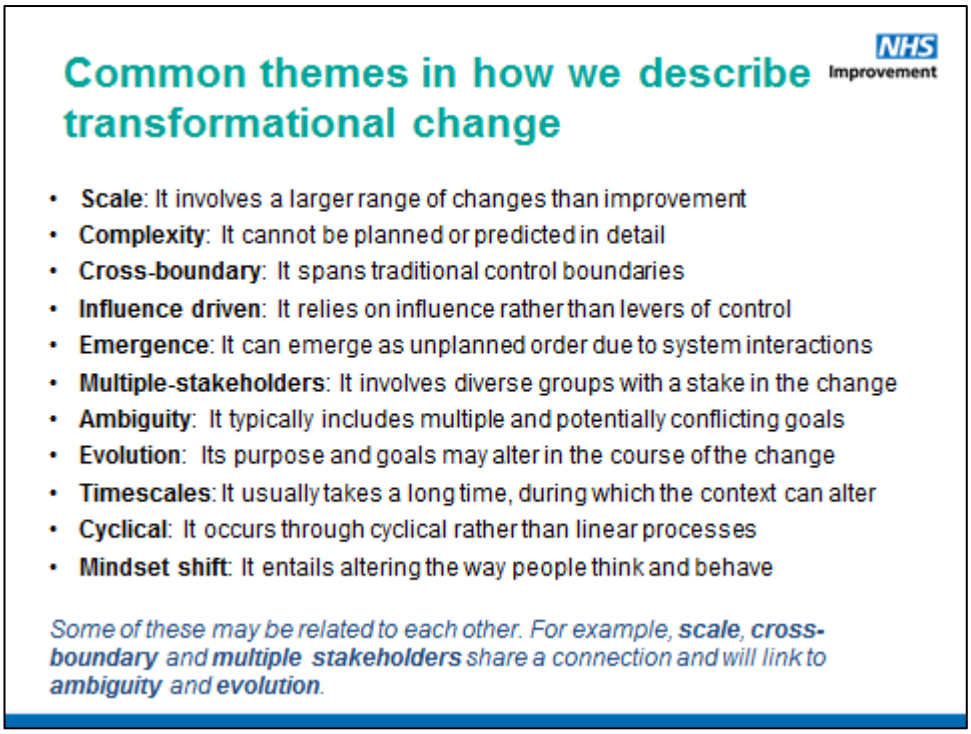


Figure 85: Common themes in descriptions of transformational change

In my researcher role I facilitated an initial discussion with three other faculty members. This rapidly determined than a descriptive definition was preferred, similar in format to Figure

84. Using the slides to provide conceptual reference points, faculty members then shared their thoughts on the definition content. This suggested broadly similar ideas across the faculty but with differences in language and emphasis. It was therefore decided that in preparation for a further meeting we would each craft our own written definitions and in my researcher role I would amalgamate these into a single definition. This amalgamated definition would then act as a stimulus for further discussion.

The individual definitions are provided in Appendix J. In amalgamating them I focused on identifying the common themes across the definitions and how these could be phrased unambiguously to become part of a coherent whole definition (as described in the appendix). The eventual amalgamated definition is shown in Figure 86.

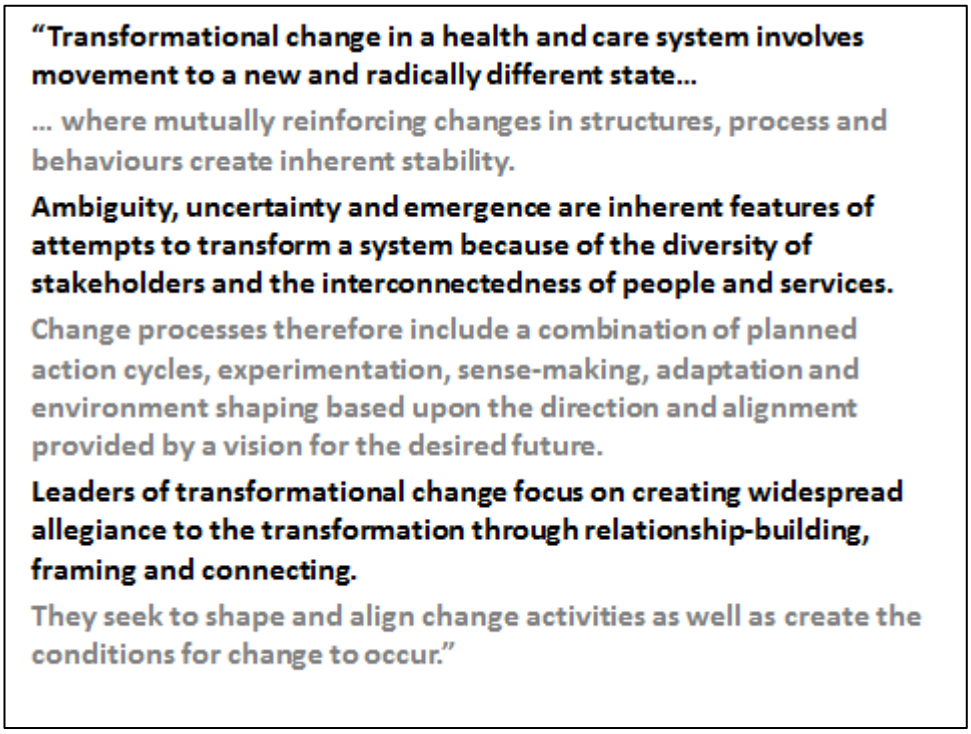


Figure 86: The ACT Academy definition of transformation

In the follow-up faculty meeting in March 2018 the faculty were asked to review the amalgamated definition. This involved checking the clarity of its language, identifying any missing or misrepresented concepts and determining if it provided a coherent and appropriate summary of our views on transformation. They also considered how the definition should be introduced into the TCSL programmes.

Faculty were satisfied with the definition and did not require any wording changes. However, due to its length they suggested we also have a shorter version for routine uses. They further

suggested we look at how the definition might be broken up into elements to serve as a stimulus for participant discussions in a module exercise.

Following the meeting I developed the shorter definition that was adopted by faculty.

> "Transformational change involves movement to a new and radically different stable state through mutually reinforcing changes in structures, process and behaviours".

This reduced definition was intended to capture two key aspects emphasised in faculty discussions as core to how we perceived transformation. The 'radicalness' associated with second order change was believed to best characterise the essential scale aspect of transformation. Alongside this, the concept of creating a form of stability through the mutual reinforcement of component changes was introduced. This was thought to express how transformations relied on multiple, complimentary changes that addressed both the technical and adaptive challenges described by Heifetz, Grashow and Linsky (2009).

In May 2018 (Cycle 5) the long definition was incorporated into a TCSL module as part of an exercise designed to help participants develop their own approach to transformational change. As shown in Figure 87 (based on a slide produced by another faculty member) this broke down the definition into a number of component parts as suggested above.

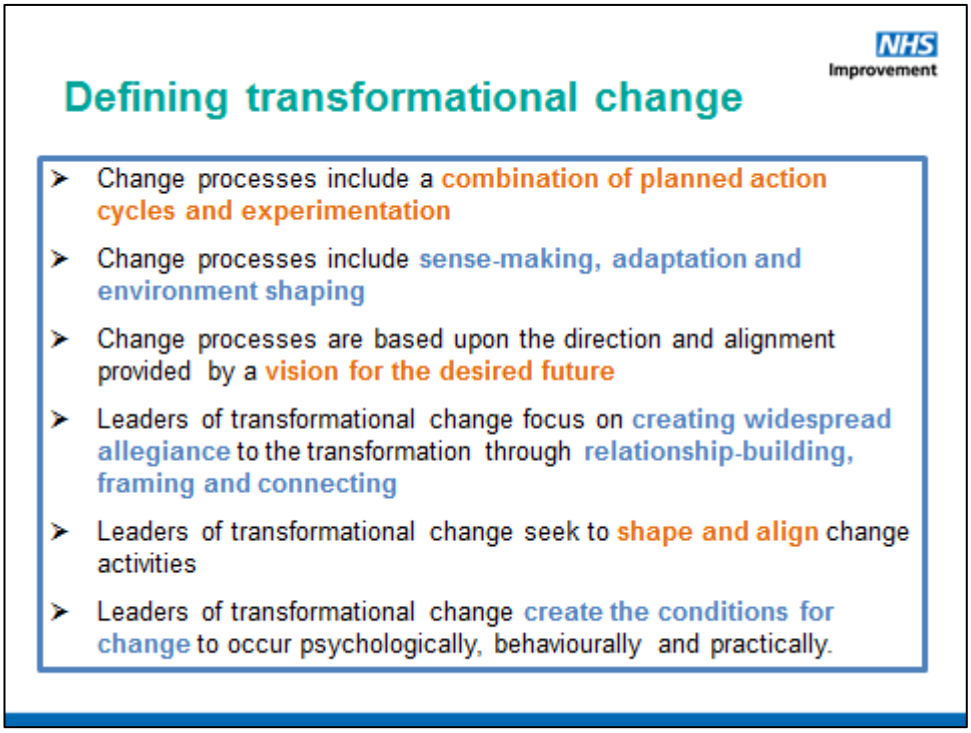


Figure 87: A slide based on the new transformational change definition

Overall, this cycle successfully adopted an iterative and inclusive approach to developing a new definition of transformational change. It consciously balanced an awareness of the change literature with the professional perspectives of the faculty. It further respected the individuality of the views of faculty members whilst helping them to reach a consensus on a new definition.

Whilst the stimulus slides were clearly helpful in this cycle, I would reflect that these could have been developed further to offer an even greater challenge to faculty thinking. As noted in Section 4.1 however, the literature on change is voluminous and the stimulus slides were limited by my capacity to review this literature at that point in time.

Whilst this cycle was predominantly about producing a definition, it also served to provide insight into the thinking of the faculty. The individual faculty definitions (provided in Appendix J) do not immediately present as underlying metaphors. However, the general focus on complexity, connectedness and emergence suggest that the faculty as a whole are influenced by a view of systems as social networks. In part this reflects Morgan's (1997) 'organisations as flux and transformation' but also incorporates elements of 'organisations as organisms'.

The individual definitions also highlight some subtle differences in perspective. One faculty member emphasised the people aspect of transformation, drawing attention to the complexities associated with multiple stakeholders. Another highlighted the turbulence of transformation, describing the need to deal with emergence. The third concentrated on the size and breadth of transformation as its defining feature. These suggest that within the common social network metaphor, individual faculty members pay attention to different features. In part, this observation explains observed differences in how faculty members have shaped the evolution of the knowledge domains. For example, paying greater attention to theories and practices addressing the dynamics of relationships and leadership; coping mechanisms for uncertainty and adaptation; or managing the scale implications of change.

What did this action research achieve?

13 Returning to the research objectives

13.1 Research for us

Earlier in Figure 6 the 'us' in this research was identified as the TCSL faculty. It was anticipated that the research would help us to improve the TCSL programmes for our participants. This would be done through increasing our understanding of the skills required in transformational change and by helping us to collectively steer the evolution of TCSL programme designs.

To support these objectives a broad range of data was generated in line with the research design described in Chapter 5.

- Over a thousand completed workshop questionnaires provided detailed information about how participants were experiencing the TCSL workshops and using the modules.
- 12 in-depth interviews with previous TCSL participants, undertaken over a year long period, became the basis for four longitudinal case studies. Another seven interviews were later used to provide a contemporary view of our programme.
- Faculty perspectives were shared through the use of interviews, questionnaires, facilitated discussions and after action reviews.
- Experts, in the form of three respected NHS chief executives, contributed their views on transformation practices. Detailed qualitative analysis was used to describe their individual approaches and common perspectives.
- A research journal provided detailed contextual data, supporting personal sense-making and reflection.

This data supported the five sequential AR cycles described in Chapters 9 to 11 and the three embedded cycles of Chapter 12. Collectively these helped to shape seven TCSL programmes, reaching over 400 participants.

Across this research the faculty were helped to build their collective understanding of transformational change, its associated skills and the pedagogical approaches that support skills development. For example, the research helped to identify

- faculty priorities amongst TCSL modules (Cycle 1) and the faculty desire to revise or create module content (Cycles 1 and 4 and Section 8.1);
- a growing emphasis on presenting TCSL content as an integrated whole, supported through encouraging the development of participant change models and reflective practice (Cycles 3 and 4);
- a range of polarities shaping faculty perspectives such as 'replace versus supplement' applied to blended learning (Cycle 1), 'frontloading versus extended' in relation to the timing of content delivery (Cycle 4) and 'breadth versus depth' when considering the numbers of modules offered in programmes (Cycle 4);
- the design principles that would be used to create a team TCSL programme (Cycle 4);
- faculty assumptions about how the relevance of TCSL content is influenced by participant seniority, project scope and team development stage (Cycle 2);
- the role of programmes in supporting catharsis or de-stressing (Cycles 3 and 4 and Section 8.3);
- the perspectives on transformation held by experienced change leaders and past TCSL participants (Sections 8.2 and 8.3);
- some of the mechanisms (or CMO configurations) relevant to transformation and TCSL programme designs (e.g. those described in Appendix B and identified in Chapters 8 to 11); and
- similarities and differences in the individual faculty definitions of transformational change, ultimately leading to a shared definition (Section 12.3).

Overall for 'us' this research was a success. It brought new rigour to how TCSL programmes were designed, delivered and evaluated whilst also building knowledge about transformational change. The uncertainties associated with 'transformation' described in Section 4.1 meant that this research alone could never hope to unequivocally define the skills

needed to transform NHS services. There were also other limitations that impacted upon this research that are discussed in Section 13.4. However, overall it did support the faculty to further build their own collective sense of what transformation means, the skills required to enact it and how we could help others to explore its implications for their own professional practice.

Going forward I would suggest that there is scope for considering how TCSL participants could become part of the 'us' in future research. The processes described here have focused on the faculty as the sense-makers of transformational change and as the authors of the TCSL programmes. In the future it might be beneficial to explore how participants, as professionals engaged in leading change, could be invited to become co-researchers to explore transformational change alongside the faculty as equals. Ultimately this could also lead to them becoming the co-designers of future programmes, the authors of their own development.

13.2 Research for me

In Section 3.1 it was anticipated that this research would help me to build my understanding of transformational change whilst gaining a greater appreciation for what it means to do AR as an insider action researcher.

Through the work associated with the design and delivery of the TCSL programmes my understanding of transformation was shaped in various ways.

- Refining the nine factors framework by creating my own model of transformational change (Section 12.1) helped me develop a new action oriented perspective on transformation (Appendix C).
- Reviewing the knowledge domains to create a guide to transformation (Section 12.2) allowed me to synthesise and prioritise the broad landscape of knowledge about transformational change into the 25 core concepts of Figure 82.
- The co-development of a definition of transformational change (Section 12.3) helped me to articulate the dual identity of transformation as both emergent and planned, whilst also helping me to understand what colleagues saw as the unique

characteristics of transformation. This further contributed to my personal attempts to conceptualise complexity described in Appendix C.

- Efforts to develop new modules, both personally and with faculty colleagues (Phase III), provided a vehicle for expressing and exploring new aspects of transformation.

The exploratory enquiries of Chapter 8 also generated data that provided me with new personal perspectives on transformational change and influenced my work as a faculty member. For example, the longitudinal case studies (Section 8.3) demonstrated to me the importance of managing the tensions inherent in major change and the implications for personal resilience. They also helped me to appreciate how transformation can be framed as multiple acts of 'connecting', including the way change leaders have a role to broker relationships between others. Interviews with chief executives (Section 8.2) highlighted for me how trust is seen as a foundation for transformation, offering an alternative mechanism to authority based levers of control. Their views also further confirmed for me the positioning of transformation as a relational approach to change.

The longitudinal case studies and chief executive interviews are also discussed further in the next section due to their potential relevance to wider audiences.

My learning about transformation also developed as I came to recognise that the change I was supporting during this research shared characteristics with transformation. In Appendix C I suggest how the complexity typically associated with transformations may be attributable to three different causes. These were all observed in the change processes undertaken in this research.

- 'Component complexity' was present in the multiple possible configurations of content and pedagogical practices within TCSL programmes, and in the varying contexts for programme delivery.

- 'Goal complexity' arose as programmes sought to combine professional development with project changes, increased by the underlying ambiguity in the faculty understanding of 'transformation'.

- 'Social complexity' was encountered in the collaborative processes undertaken between faculty members. Decisions and actions had to be negotiated and remain cognisant of differing perspectives on learning and change mechanisms.

My own experience throughout this change process therefore became a source of learning about transformation that is explored in Appendix K. There the knowledge domains are used as lenses to reflect on this research. For example, the content of the TCSL module on 'Systems thinking' is used to suggest various feedback patterns that can be inferred from research observations. Similarly, the 'Culture' knowledge domain is used to discuss faculty behaviours.

The research also provided me with a greater appreciation of AR and what it means to be an insider action researcher.

In Section 4.2 I introduced my own AR model combining perspectives from various academic sources. Throughout the research this model and its associated questions acted as reference points to shape my activities and reflections. However as noted in Chapter 7, this model is an oversimplification of how this research unfolded in practice. For example, whilst programme design and delivery provided an ordered cyclical structure to Chapters 9 to 11, many smaller cycles of activity also occurred within this structure, often emerging organically and sometimes as parallel processes, reflecting the Dionysian aspect of AR described by Heron (2006).

Similarly, this research employed other enquiry processes alongside the main cycles as described in Chapter 8. These were experienced as having a longitudinal, and sometimes hard to define, impact upon the main AR cycles. This was because their enquiry and sense-making processes occurred over an extended period and influenced faculty actions throughout. For example, faculty involvement in the longitudinal case study interviews (Section 8.3) meant that each faculty member was influenced very directly at the point of data collection leading to new knowledge that informed later actions. This influence continued at various stages in the analysis process as their understanding or interpretation of the case studies developed. So, what took place as an isolated piece of research cast a shadow of influence over multiple contemporaneous cycles.

As described in Section 6.2 I also experienced some of the downsides of 'backgrounding' the AR process (Figure 20). For example, on occasion separating my own participant voice from that of the researcher voice became difficult, requiring me to find mechanisms that allowed some separation (e.g. through how I structured meetings or presented research data). Also, in applying the lenses of the knowledge domains to this research in Appendix K I noticed how AR and transformational practices such as 'framing' (Fairhurst, 2005) take different stances

on the role of data in change. This recognised an element of conflict between my researcher and practitioner roles as I either acknowledged multiple potential interpretations of data or acted as an advocate for those that aligned with my professional views.

In my research role I also had to explore and determine what I considered to be AR. My own sense of grappling with the process of AR and how to apply it in this research is discussed later in Section 13.4.

As an insider action researcher I also gained personal learning about the processes of supporting change.

- I experienced the challenge of "powerful defensive routines" (Argyris, 1999 p.126) that masked divergent assumptions about programme designs (Cycle 1). This ultimately led to a focus on more clearly agreeing the design principles that would shape future designs (Cycle 4).

- I observed the way polarities can feature in change processes as competing sets of beliefs that need to be recognised and managed as complementary. For example, the tension between upfront delivery of programme content versus a more gradual approach (described as 'frontloading' versus 'extended' in Cycle 4).

- I saw how dialogue can help reveal unvoiced assumptions. For example, exploring faculty beliefs about the role of positional power in change processes (Cycle 2).

- I experienced how the use of boundary objects can help groups in design activities, such as in the design of the programmes in Cycles 3 and 4.

- I saw how participation in data generation activities can create experiential knowledge that can help to engage others in using the data to inform action. For example, contrasting the high levels of faculty involvement in the longitudinal case studies with the comparatively low levels in the chief executive interviews (Chapter 8). In these I recognised how the latter interviews had less immediate influence on faculty practice.

Overall for 'me' this research was a time of growth. It allowed me to explore how to act as a researcher and how to build research into my professional role. It also saw significant advances in my understanding of transformation. As I helped the faculty to make sense of change practice through the research and in sharing relevant literature, I also aided my own

sense-making. Appendix C is perhaps the most tangible example of this sense-making and will be explored more fully in the next section as it offers perspectives that may be of relevance to other audiences.

13.3 Research for them

For those with an interest in the practice of transformational change, Section 3.1 anticipated that this research might provide some transferrable insights.

In Chapter 8, enquiry with those involved in transformational changes provided various case studies that describe change practices and reflections on the principles underpinning actions. These enquiries were structured to provide understanding that could be transferred into the TCSL programmes and thus may be helpful for wider audiences engaged in aspects of transformational change. They are therefore summarised here.

The longitudinal case studies (Section 8.3) were based upon interviews undertaken over a period of a year with four pairs of TCSL participants leading major changes. These resulted in the thematic model reproduced as Figure 88 and Figure 89 which has already been published for external audiences (Tweed et al., 2018).

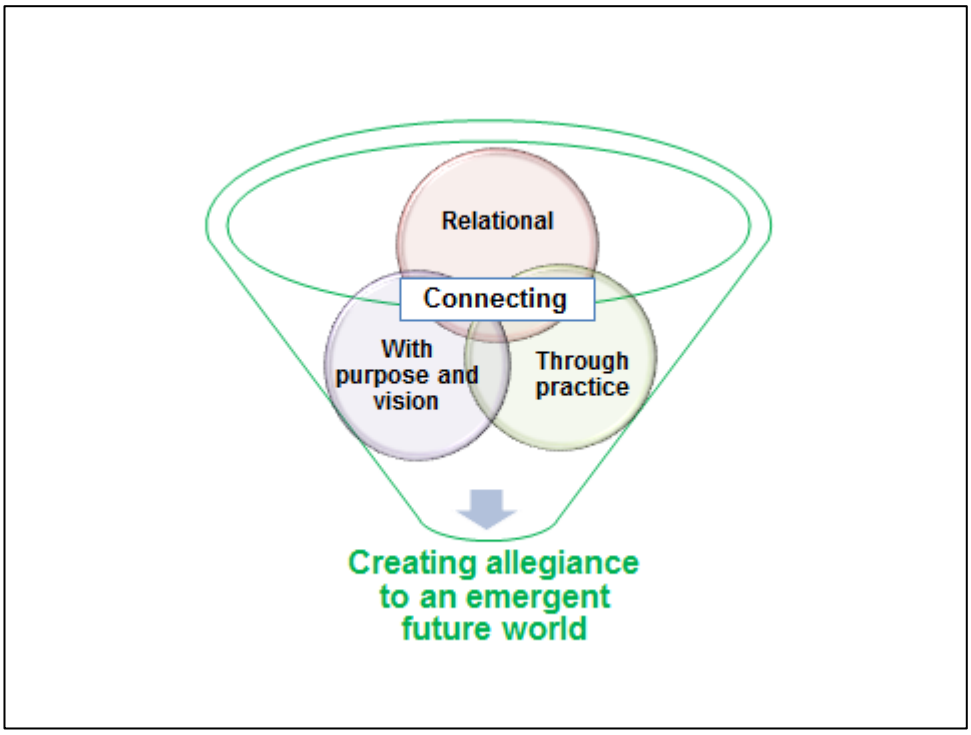


Figure 88: Representation of the longitudinal case study themes (first element)

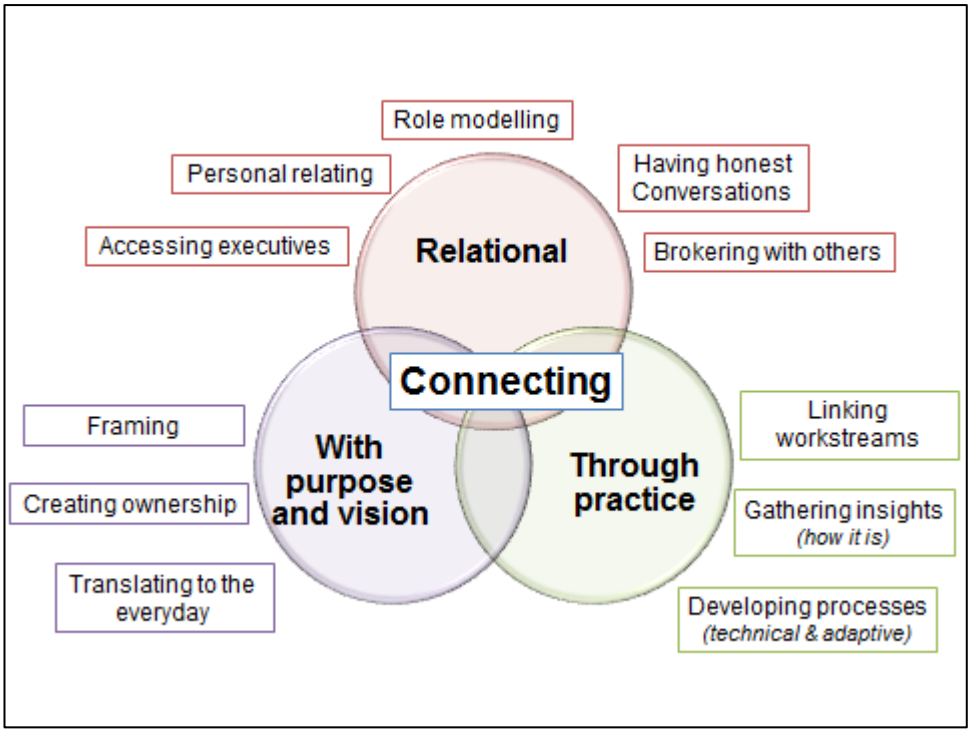


Figure 89: Representation of the longitudinal case study themes (second element)

The model shown in the figures suggests that transformation requires a focus on different facets of connecting as part of creating allegiance to an emergent future state. 'Relational connecting', or the need to build relationships across the system being changed, fits with the complex adaptive view of human systems (e.g. Zimmerman, Lindburg and Plsek, 1998). This suggests that system behaviour is determined by the nature of the connections between those in the system. Transformation therefore occurs by altering the nature of those relationships. In the figure, 'Connecting with purpose and vision' captures the motivational aspects of change leadership, seen for example in theories of transformational leadership (Bass and Riggio, 2006). In this process leaders help others to become committed to aspects of the change so that leadership becomes more widely distributed. As a process it also helps to align the actions of those leaders. The third area of 'Connecting through practice' highlights the need for other practical actions to align system activities in order to steer and sustain a change. This reflects some of the mutual reinforcement of action described as essential to transformation by Bevan, Plsek and Winstanley (2013).

Analysis of the longitudinal case study data also led me to suggest different categorisations for the ways in which participants were attempting to create allegiance in order to align actions. This is reproduced as Figure 90.

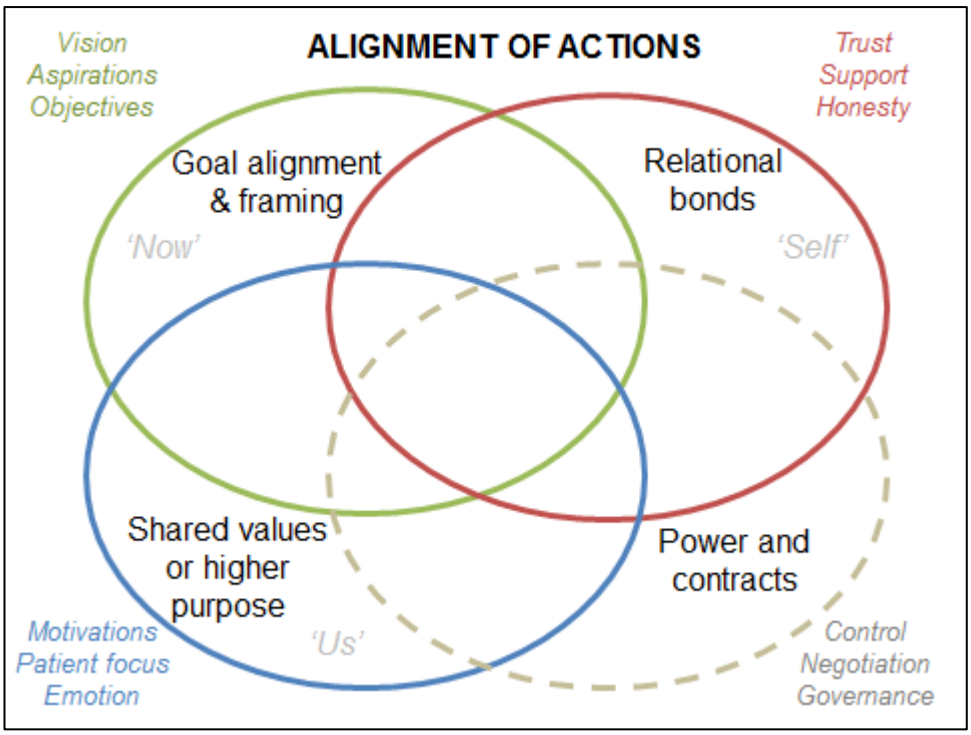


Figure 90: Aspects of allegiance identified in the longitudinal case studies

Allegiance approaches in transformation are shown as three main (coloured) categories that can exist independently or in combination. These reflect allegiance to the values or purpose underpinning a change process (blue), allegiance created by the alignment of the change process with personal goals which may differ across stakeholders (green) or personal allegiance to those leading the change through relational bonds (red). These three mechanisms have similarities to the narrative elements described in the change approach of Ganz (2011). Also shown in Figure 90 is a fourth mechanism describing how alignment of activities can be negotiated or enforced in other ways (grey). This represents a transactional view of change that typically underpins mechanical change models and provides a contractual background to many change processes in healthcare.

The longitudinal case studies also highlighted the common experience of participants of dealing with tensions prevalent in transformational change as shown in Figure 91. This includes managing personal anxiety and that of others, adapting in reactive and opportunistic ways in response to changing contexts and managing various polarities experienced in the change processes.

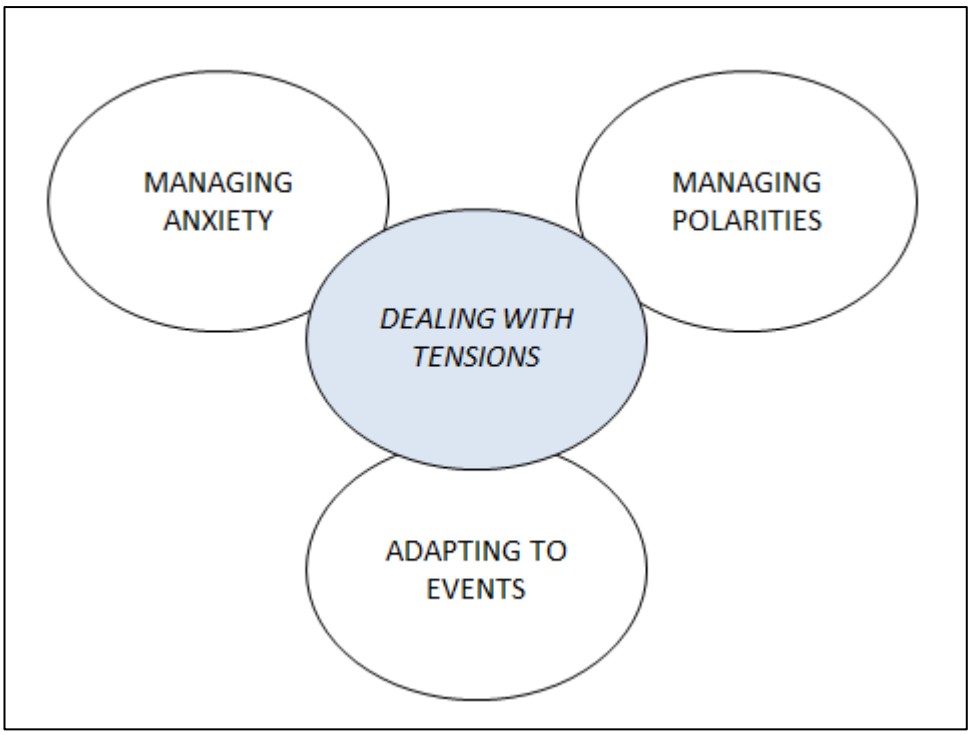


Figure 91: Additional case study themes centred on the need to deal with tensions

As participants in TCSL programmes, those interviewed for the longitudinal case studies had varying degrees of experience in leading change. In contrast, the chief executive interviews (Section 8.2) were intended to capture the wisdom of experienced change leaders.

Like the longitudinal case studies the chief executive views highlighted the role of relationship building and trust in leading change (shown earlier in Figure 31). They also all described action as important, viewing it as part of a process of engaging, listening and acting on what was heard. This responsive action process is consistent with both the cyclical description of engagement in Bevan, Plsek and Winstanley (2013) and the allegiance activities of Figure 90.

As instrumental case studies the themes presented by each individual chief executive could also be of relevance to those interested in transformation.

As noted in Section 8.2, one chief executive chose to emphasise the change leader's role of creating connections (echoing the findings shown above in Figure 88). They also highlighted the important role of their senior team in leading change, describing various facets of that role. These are shown in Figure 92.

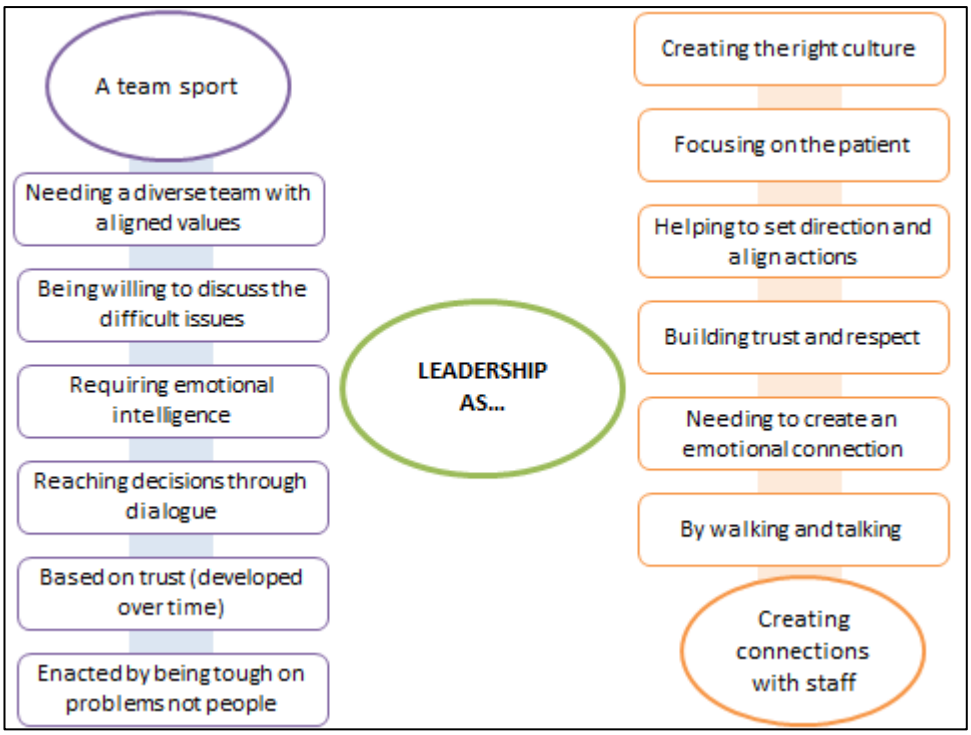


Figure 92: Themes from Chief Executive 'A'

Another chief executive focused on the cultural features that enable transformation and described ways in which these could be created. This context shaping view is illustrated in Figure 93. Again, this offered a relationship centred perspective on change where culture was described in terms of the type of relationship that should exist between a change leader and others.

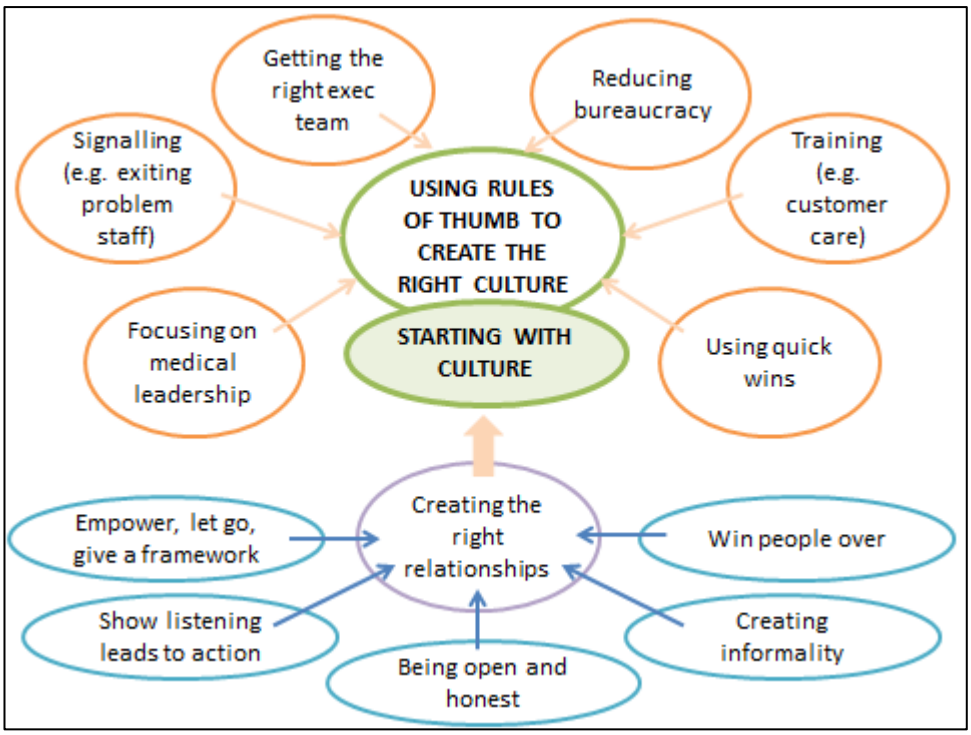


Figure 93: Themes from Chief Executive 'B'

The final chief executive spoke about two connected areas of change practice. The first (Figure 94) highlighted the need for honest conversations based upon trust that was built over time. This was similar to the relational culture described by the second chief executive.

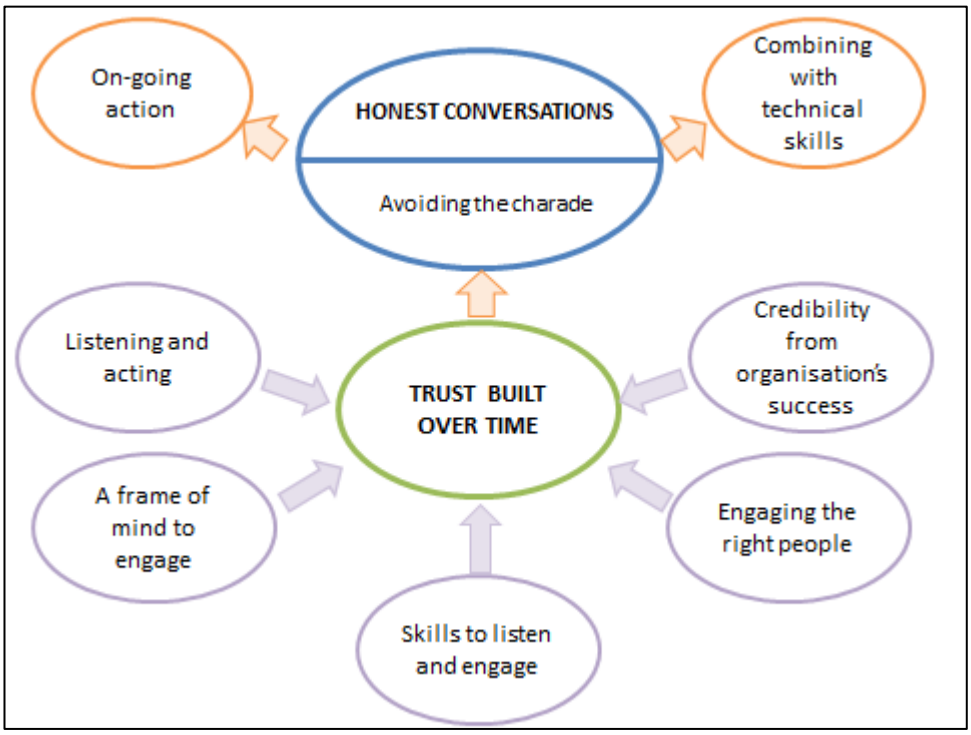


Figure 94: Themes from Chief Executive 'C' (honest conversations)

In the second area of practice (Figure 95) it was stressed how change leaders need to avoid 'either / or' thinking (i.e. the polarisation of views mentioned elsewhere in this report and described in Figure 91 in the longitudinal case studies).

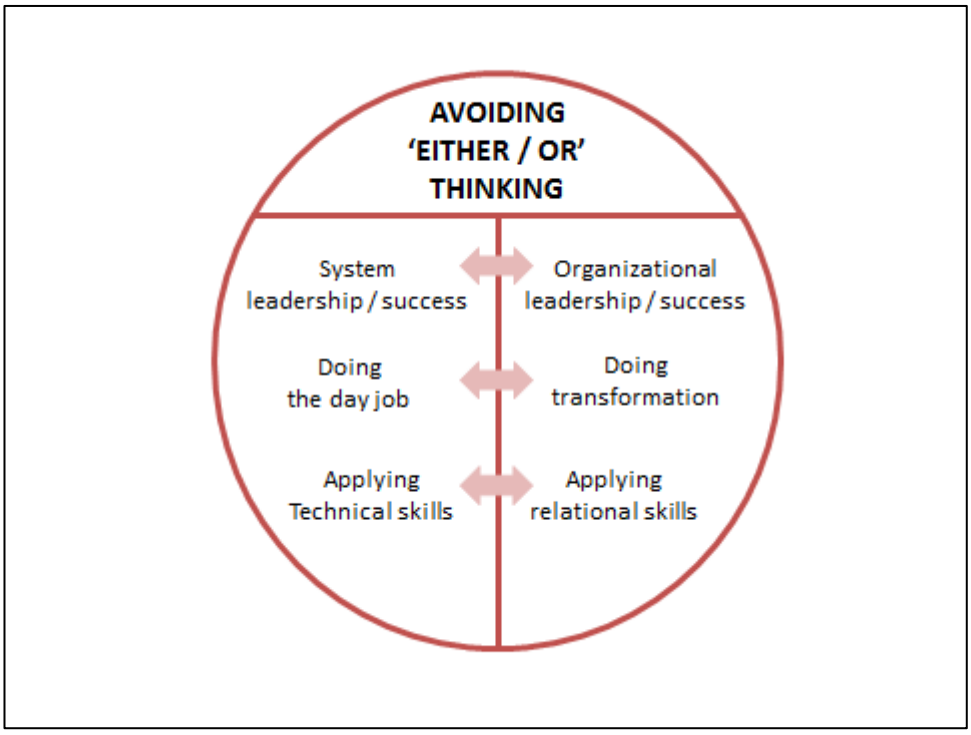


Figure 95: Themes from Chief Executive 'C' (avoiding either / or thinking)

Both the longitudinal case studies and the chief executive case studies are explored in greater detail in Chapter 8 and considered there in light of the wider academic literature.

The enquiries of Chapters 9 to 12 (and the related development of new thinking about transformational change described in Appendix C) also offer insights that may be of interest to those involved in change.

The nine factors framework (described in Sections 5.2 and 12.1) was originally developed by the TCSL faculty to describe the core activities of transformational change. During this research it was refined through the development of a new action-based model of change. In its new form the nine factors framework may be of relevance to others who are interested in how to categorise the main practices involved in transformation.

This new form was also reflected during this research as a revised questionnaire illustrated in part in Figure 96 (with all elements shown earlier in Figure 73 to Figure 75). This questionnaire uses a semantic differential scale to assess the extent to which activities in a change process align with the nine factors. This questionnaire could be of use to others who

are interested in exploring the change activities taking place in a system or as part of developing measures related to readiness for change. Also, as described in Cycle 5, the questionnaire may have utility in assessing the impact of development programmes on the change practices of participants (e.g. as shown in the longitudinal measures displayed in Figure 71).

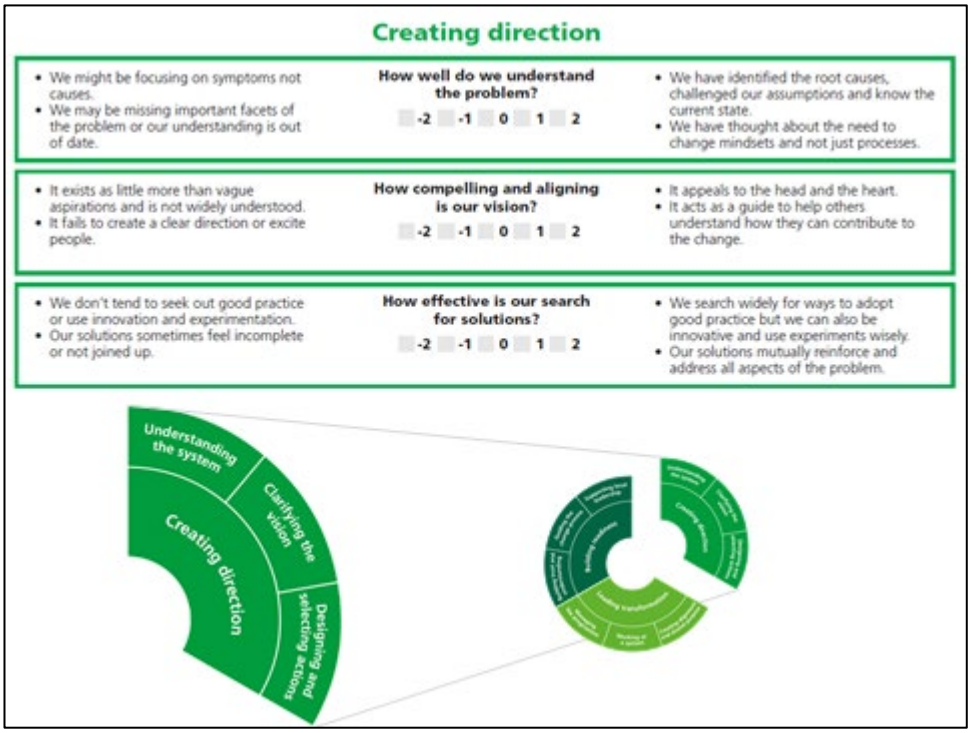


Figure 96: The 'creating direction' questionnaire elements

The practices involved in transformation were also summarised in other ways in this research that may be helpful to those interested in how transformation is characterised by its activities or principles. The faculty definition of transformational change (Section 12.3 and Figure 86) provides a succinct description of the main features of transformation. This could be considered alongside the definitional perspectives offered in Section 4.1. Similarly, the 'A-Z of transformational change' describes my own view of 25 key areas of focus for those leading major change (ACT Academy, 2017; Cycle 7 and Section 12.2).

Throughout this research my own thinking about change and complexity evolved as an exploration of theory and practice as described in Appendix C. The views expressed in that appendix represent a personal sense-making of what is an under-explored and conceptually confusing area. My views are therefore offered for others to consider, build upon or revise.

In the appendix I describe my generic model of transformational change, developed as part of the cycle introduced in Section 12.1. This action-oriented model takes the perspective of

those tasked with leading a major change and was developed to incorporate increasing complexity into an initially basic change scenario. As uncertainties and multiple change actors were introduced, the model describes the range of action categories present in transformation and how activities become increasingly iterative rather than linear. The full model is reproduced as Figure 97.

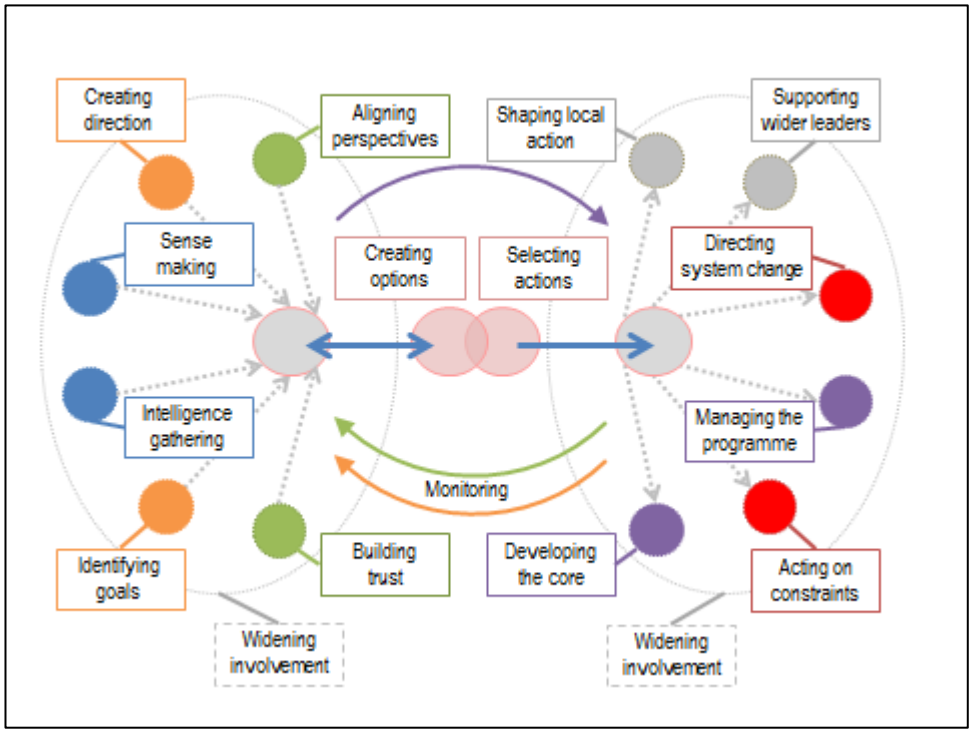


Figure 97: The transformational change model

Whilst Figure 97 shows two domains of action (left and right) separated by decision making processes, the highly iterative nature of the model suggests that the leadership of transformational change involves an on-going set of choices between all the different action types. Leaders potentially move fluidly between the action categories and could visit each on multiple occasions. To better represent this recursive process an alternative depiction of my change model was created as shown in Figure 98.

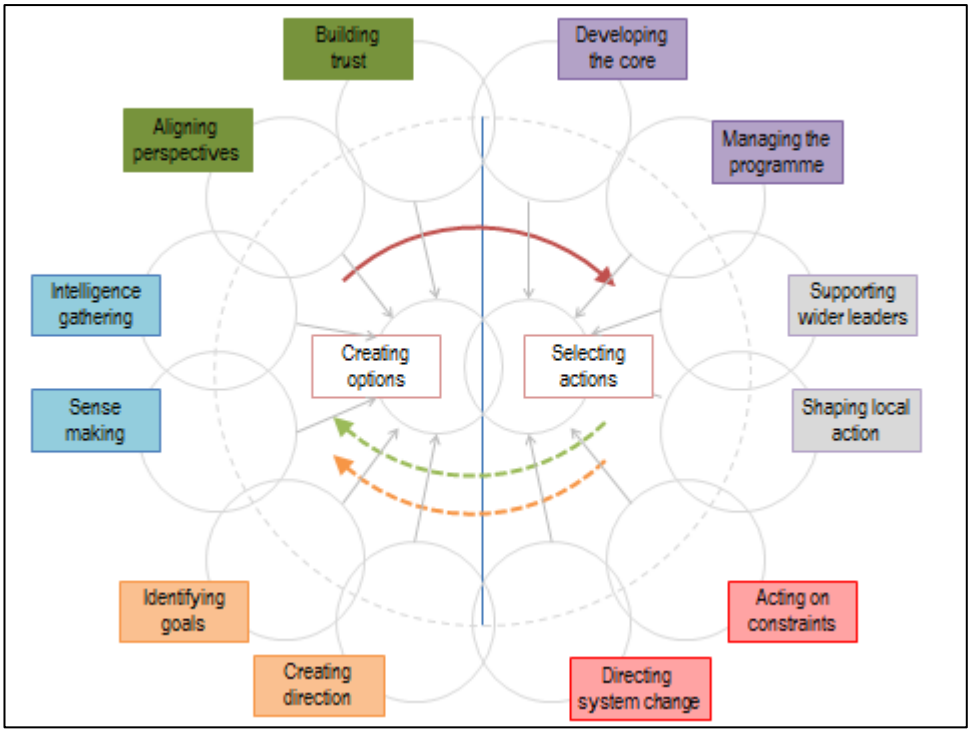


Figure 98: An alternative presentation of the transformational change model

Developing this model of transformational change also required that I find new ways to think about what is meant by 'complexity'.

In Appendix C I describe how I have moved away from seeing complexity as a system description where a system is defined in isolation from its properties. Instead I relate complexity to attempts to change one or more properties of a system. This redefines a system around the component parts that give rise to each specific property (irrespective of whether these parts are known or unknown). For example, an 'urgent care' system is no longer defined by geography or other arbitrary boundaries but instead defined in multiple ways according to the specific components that contribute to its different properties (e.g. waiting times, mortality, cost etc.). This new perspective means that change processes relating to more traditionally defined systems (like urgent care services in a city) can be viewed as having complex and non-complex aspects according to which properties are the subject of change.

This view of 'change complexity' is expanded upon in the appendix to suggest at least three distinct causes of complexity as shown in Figure 99 (and referred to earlier in this chapter). Each of these creates a lack of predictability in the change process.

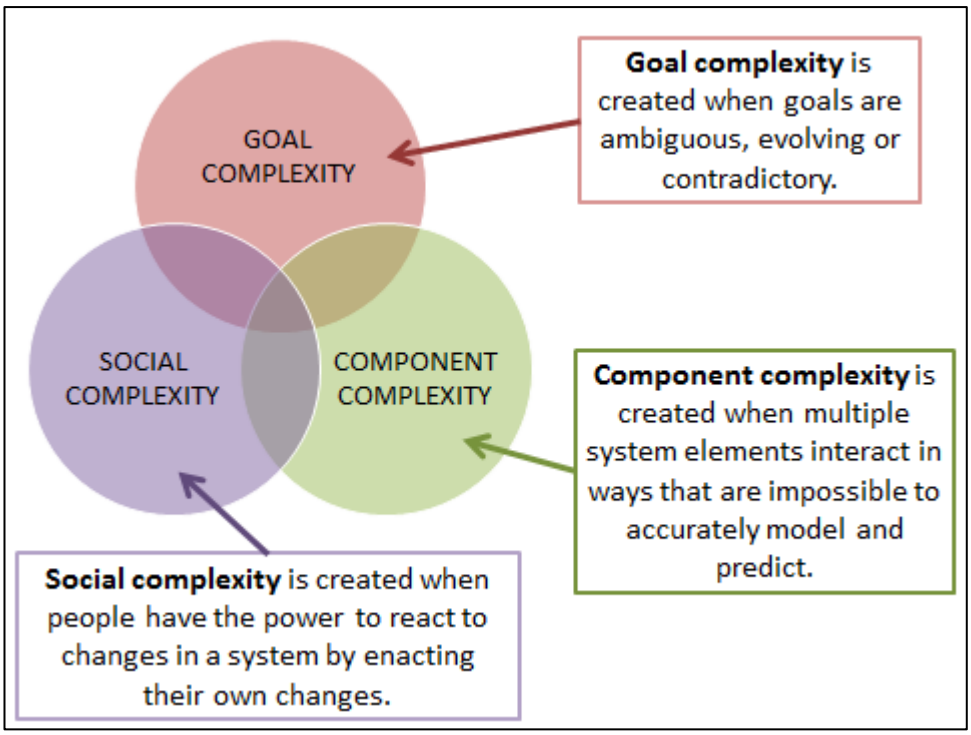


Figure 99: Three suggested causes of complexity

By identifying these different causes of change complexity I was also able to categorise change activities into different scenarios and hypothesise different approaches to change dependent upon the type of complexity encountered. An initial set of nine scenarios are described in Appendix C and later expanded to include a tenth scenario where an additional goal of enhancing adaptive capacity is considered. These scenarios could form the starting point for how different forms of transformational change are described.

In offering new ways to define systems, Appendix C also provides a new conceptualisation of what is meant by 'expertise' (a term typically associated with planned change in predictable systems). In the appendix expertise is defined as the existence of knowledge about how configurations of constraints on system components might give rise to patterns of system properties. This definition potentially offers new ways of thinking about change and suggests how the seemingly opposed 'mechanical' and 'complexity' oriented views of change can be better integrated through their relationship to expertise.

Therefore for those with an interest in transformational change, complexity or system behaviour, the products of Chapters 8 to 12 and the sense-making of Appendix C offer new tools and perspectives that may support further enquiry.

13.4 Research limitations

Insider action research takes place in a real world setting and engages others in joint processes of action and enquiry. In doing so it confronts research method with the reality imposed by the context of that research. This section therefore discusses how this research was shaped, and at times limited, by four contextual factors as shown in Figure 100.

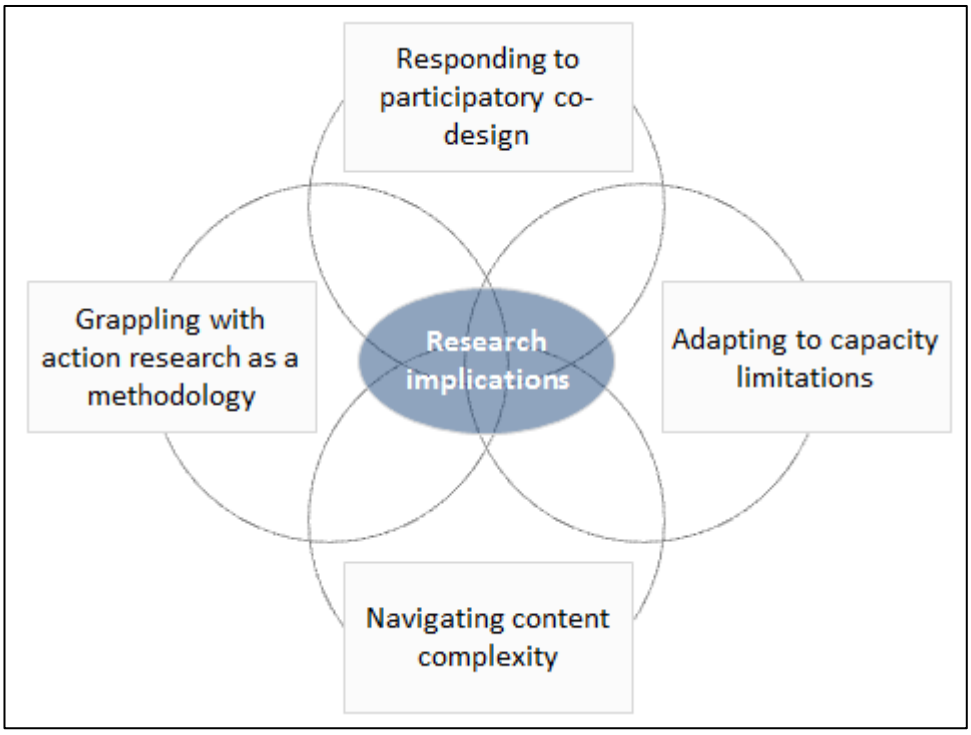


Figure 100: Contextual factors influencing the research

The topmost element in Figure 100 represents the need to take account of the participatory nature of this research.

One influential aspect of this was the need to work with differing epistemological expectations within the TCSL faculty about data generation and interpretive processes. It was evident that some faculty members saw research as requiring an objective observer stance, uncovering truths about our programmes and the relevance of its content to participants. This perspective favoured methods such as participant questionnaires, focusing on their quantitative elements. For these faculty members, qualitative data (e.g. from interviews) was of interest but their orientation towards seeking objectivity led to them struggling with notions of transferability. Other faculty members were more accepting of subjectivity and saw the need to explore participant accounts of their experience from a more constructionism-oriented perspective. This also translated into a greater engagement with understanding the source of differences of perspective within the faculty.

Reconciling these different expectations of 'research' was challenging. Group processes were used to determine data generation methods with the intention that the need for consensus would surface and resolve the different perspectives. To a degree this was successful. Data generation blended quantitative with qualitative and in both there was good attention to the quality of data. However, ultimately this led to what was perhaps an over-emphasis on questionnaires and their quantitative elements. With hindsight, a more direct exploration of epistemological positions may have helped to promote additional enquiry processes or to rebalance the focus to more fully consider the qualitative elements.

This epistemological divergence also had other practical consequences. Whilst I chose to adopt the realist position described in Section 5.1, and saw the merits of the realist evaluation approach of Pawson and Tilley (1997), I could not convince other faculty members to fully adopt this as our way of learning about our programmes. An historic decision to use the evaluation framework of Kirkpatrick and Kirkpatrick (2006), its perceived relative simplicity and its use for internal reporting meant that moves towards collecting different types of data to reveal more about CMO configurations were resisted.

The co-design of the research with the wider faculty also resulted in some compromises. The formative value of data generated about participant experiences was at times in tension with a faculty need to demonstrate the worth of its programmes. This showed up in various forms. For example, in Cycle 3 the questionnaire rating scale was altered from five to three points in a way that biased summary data towards presenting a more positive appearing result. Also, whilst the interviews by a non-faculty member in attendance at workshops in Phase III had formative value they were simultaneously used to capture data for marketing purposes. This altered both their focus and the nature of how they were considered by the faculty.

Co-design processes themselves were also influenced by hierarchy within the faculty in ways that the research process could not easily challenge. One faculty member held responsibility for the ACT Academy as a whole and therefore saw their role as providing direction for the TCSL programmes. So, whilst faculty discussions were consensus oriented there was at times an implicit emphasis on the views of one person. This also became overt on occasion when decisions had to be made in the face of disagreements or to align with wider ACT Academy objectives. An example of the implications of this was the eventual relatively minor impact on learning from linking faculty members with teams in Cycle 4. The singular influential view that this working with teams was not necessary led to only minimal interactions by faculty members with participants and subsequently few learning opportunities.

Many of the points noted above were also influenced by the next element in Figure 100 relating to capacity limitations.

The research period was a busy time for the faculty. Despite a desire to learn and improve, our capacity to do so was limited by our ability to create the time required. In Section 6.2 I described how my approach to this research generally adopted a 'backgrounding' approach, seeking to integrate AR into working practices. In doing so a goal was to bring a research orientation to how we undertook our work without making excessive demands on our capacity. As noted in that section such an approach has downsides, some of which were experienced here. For example, the confusion between my researcher and practitioner voices in the discussions described in Section 8.1.

Capacity also influenced our choice and application of enquiry methods.

- In addition to the epistemological driver for questionnaires, their comparatively low resource requirements for analysis also made them preferable to interviews.
- The degree of qualitative analysis of open text questionnaire data varied according to how much time was available between data collection and faculty discussions, sometimes compromising on the rigour of thematic analysis.
- The longitudinal case studies took a long time to analyse due to the detailed coding of multiple interviews, leading to their diffuse impact on this research (as described in Section 8.3 and earlier in this chapter).
- Enquires such as the chief executive interviews (Section 8.2) and many of those described in Chapter 12 became personal research processes as I devoted my own time in the knowledge that other faculty members had limited capacity.

My own capacity also became an issue during this research in other ways.

In Cycle 1 there were undoubtedly missed opportunities to generate further data about the problematic blended programme. However, at the time I had to favour my practitioner role over that of being a researcher as I responded operationally to the lack of participant involvement in the on-line activities. An irony of AR is therefore that at times when its emphasis on evaluating action is most needed, the insider researcher may have the least capacity to devote to it.

There were also times when my capacity as a researcher became a source of conflict. For example, this occurred when I was reminded by my manager (also a faculty member) that my doctorate was something "to be done in your own time". Their conflation of the doctoral process with AR suggested to me at the time that I had not demonstrated a strong enough case for how the research was benefitting 'us' as well as the 'me' in the framework described in Chapter 3. I also suspected that their view might have been influenced by my choice to background the AR activities, making their contribution to our work less visible. In retrospect however I also now recognise that my own personal investment in needing to complete a doctoral process was in effect being used as a lever of control. This adds a further dimension to the discussion of insider research in Section 6.2 (i.e. the vulnerability created by having a personal investment in the research).

Finally, in relation to capacity it is important to note that TCSL participant capacity also influenced the course of this research. Within workshops the participants were provided with time to complete questionnaires, but this inevitably vied with their desire to continue their team-based discussions. Ultimately this led to lower response rates and reduced detail in those questionnaires returned. Also, attempts were made throughout the research to develop participant interest in further case study activities akin to those described in Section 8.3. However, participants generally indicated that their transformation work was consuming all their available time, leaving no time to participate in further research.

The third area identified in Figure 100 is the challenge of navigating the complexity of the topic area of this research. As discussed in Section 4.1 there is little agreement as to what is meant by transformational change or the skills it requires. This research therefore faced the dual challenges of seeking to understand a topic that others find difficult to agree on whilst also seeking to develop and evaluate programmes on that topic. In addition, the evaluation of programmes required the untangling of the value of TCSL content from the processes of its teaching, recognising how context influences both. This complex picture was difficult to articulate and navigate but eventually resulted in the descriptions of the research offered in Section 5.2.

This complexity had research consequences. The data generated via questionnaires was intended to act as a deductive test of programme designs and content. In reality the limited details in the participant comments accompanying their rating scores meant that the questionnaires had to instead serve more as an aid to faculty interpretive processes. Similarly, much of the effort of this research revolved around the inductive sense-making of

faculty as they revised TCSL content or strived to reach a better understanding of what they wanted from TCSL designs. In addition, it was also felt necessary to try and introduce additional stimuli for faculty discussions by finding ways to generate knowledge about transformational change as described in Chapter 8.

Another important aspect of the topic complexity was the influence of scale in transformational change as described in Section 5.2. As a process typically occurring over relatively long periods of time and across large geographical scales, the relevance of TCSL content could not easily be tested empirically through observing its impact in systems. This would have required access to multiple people over a long period and would raise challenging questions about what data should be collected. Similarly, these timescales, and the limited capacity of TCSL participants to offer detailed feedback, meant that even over the course of a 4-5 month programme it was difficult to get longitudinal data about the impact of TCSL content. Measures of the relevance of content therefore became a judgement offered by participants based upon their experience of applying this content within the TCSL workshops. As noted in Section 5.2 this also conveyed some benefits but ultimately it limited our understanding of how TCSL content was being experienced externally to the programmes.

In practice, attempts to overcome the 'scale' limitations on the research were made by undertaking the longitudinal case studies (Section 8.3). These offered some insight into the longer-term value of TCSL programmes, supporting their overall relevance to change practice. However, these were limited to interviews with just two people from each system. Also, their retrospective nature meant that judgements had to be made about how transferable the learning from them was to the design of current TCSL programmes and content.

The complexity of the research topic also influenced the research in unexpected ways. Appendix G describes the analysis of the workshop questionnaires showing how the relevance of each module was rated (typically on a 1-5 scale). Nearly all modules throughout this research unexpectedly achieved average ratings in the 4-5 range (i.e. between 'good' and 'very good'). This positive result however meant that our ability to easily discriminate between high value and low value modules was limited. This created a greater reliance on faculty observations and our interpretation of participant reflections. So, it appeared that in general we made good choices about programme content and designs yet in doing so it made it increasingly difficult to identify how we could improve our work.

The final element of Figure 100 relates to grappling with the nature of AR and its application in this research. This has already been touched upon in earlier sections in this chapter.

As shown in Section 4.2 the AR process is at once simple and complicated. Its simplicity lies in the apparent logic of the cyclical process of constructing, action planning, taking action and evaluating action. Its complicated side is most evident in the multiple layers of reflection associated with this cycle. Reflection is embedded as a stage in the cycle as evaluation. It is embedded in each stage in what Coghlan and Brannick (2014) describe as the general empirical method. It is also there in the meta-learning that transfers between cycles and exists as learning about the AR process. Complication occurs in other ways. It exists, as noted earlier in this section, in the participatory aspects of AR and in the particular demands on the insider-researcher. It also exists in the challenge of how Stringer's real world 'messiness' (1999) intrudes upon one's ability as a researcher to offer a simple narrative of change (as seen in Chapters 9 to 11).

Complication for me also occurred in making sense of AR as a deductive and inductive process, developing the necessary conceptual alignment between Figure 1 (the inductive and deductive processes) and Figure 12 (the AR cycle). For me, there was a real sense of grappling with how my action-oriented work fitted with the AR process, differentiating knowledge creation from the deductive testing of action. There was also the question of what was the 'action' in my AR cycles. Was it the action I took to support processes of programme and content design or was it the action of delivering these programmes? Eventually I settled upon the latter, coming to see the TCSL programmes as an embodiment of faculty hypotheses about their content and design.

This created a focus for me but also caused me to question the nature of AR and what its 'research' aspect means. For example, simplistically the 'research' can be thought of as the deductive test of action. But in my work I also saw a role for research rigour in the inductive aspects of real-world change. This included how we gather and interpret data to challenge our premises or the awareness we bring to identifying the principles underpinning our actions. These thoughts were what brought me to the inductive and deductive representation of the research depicted in Figure 1. I also came to understand that in my interpretation of AR I was attending to both the inductive requirements of constructing whilst also using research methods to add enquiries that would support that constructing (e.g. through the enquiries of Chapter 8). I therefore reached a place where I felt comfortable

as articulating my research as AR, accepting that my wider activities were part and parcel of bringing a research orientation to making this AR a success.

13.5 Conclusions

This insider action research was undertaken to help the ACT Academy faculty build the knowledge and collective intent required to design and deliver its TCSL programmes. Over a period of two years it supported seven such programmes, reaching over 400 senior public sector leaders.

The research had three main objectives.

1. To explore what is meant by transformational change in the NHS.
2. To determine what change leaders need to know in order to enact such change.
3. To shape how the ACT Academy supports these leaders in gaining and using that knowledge.

The first two objectives reflected a desire to explore what is meant by transformational change as a concept and praxis whilst the third sought to see this knowledge reflected in the work of the ACT Academy. These objectives recognised that change across large social systems is often viewed as qualitatively different from smaller scale incremental change but without its own well-defined paradigm of practice.

The objectives were addressed across five major AR cycles as faculty were supported to engage in reflective discussions, collaborative design activities and the review of participant programme evaluations. These cycles reflected the way in which TCSL programmes embodied the 'theories incarnate' of faculty about transformational change and the pedagogical activities required to aid learning and practice. Additionally, these cycles were supported by inductive enquires used to capture and share the perspectives of faculty, former TCSL participants and change experts. These brought new knowledge into the programme design processes as both insight and provocation.

During this research the faculty's understanding of transformation advanced in various ways to become embedded in our programmes as new designs and content, or to reaffirm our belief in what was already in existence. For example, our individual professional perspectives

were explored and combined to offer a joint definition of transformational change. We also agreed a revised version of our action-oriented nine factors framework, making this more central to our programmes and taking the first steps towards using it as a tool to measure system progress. Our understanding also advanced through the inductive enquiries, hearing how experienced change leaders focused on trust building and action and how past TCSL participants placed an emphasis on multiple aspects of 'connecting' whilst managing the tensions of transformation.

The research also supported greater shared understanding and action within the faculty. We collectively prioritised programme content and co-developed design principles. We recognised our own growing belief in the need to view TCSL content as a mutually reinforcing whole enhanced by participant reflective practice, encouraging participants to create their own models of change. These processes aimed to help participants integrate learning with their own professional practice. We also explored the polarities and assumptions shaping our individual views in the faculty to find ways to jointly navigate an agreed path forward.

At a personal level the research also allowed me to build my own knowledge and contribute to the work of the faculty. My sense -making of transformation developed as I created my own model and guide and explored new facets of complexity. I learnt more about the mechanisms and contexts influencing transformation from the inductive enquiries and as I began to see this research as itself an act of transformation. I also learnt from the experience of doing action research, encountering the challenges of embedding a research orientation into the workplace and balancing the dual personal roles of professional and researcher, attempting to find my voice in both.

Overall, this research represented a journey for me and for the ACT Academy. We succeeded in learning more about transformational change, the capabilities it requires and how to embed these in our work. This journey is far from over as transformation remains an elusive concept, but the journey will undoubtedly continue as we gradually come to know more about enacting transformational change in the NHS as we improve it for the patients it serves.

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Appendices

Appendix A Transformational change knowledge domains

This appendix describes the knowledge domains underpinning the TCSL programmes.

Each knowledge domain is represented by its associated module descriptions used in 2016 (ACT Academy, 2016). Three additional descriptions have been added to include new knowledge domains introduced during this research.

Knowledge domains

I. Exploring key concepts in transformational change

This opening topic starts our exploration of transformational change. It identifies how our approach to change is governed by the ways in which we characterise the systems and the challenges we face. Seeing systems 'as machines' or 'as sets of relationships' are described as the predominant metaphors within system change, each with its own implications for the way we choose to tackle change. Drawing upon the field of complexity thinking we go on to describe four system types using the Cynefin Model and contrast the approaches to change in each. We close this topic by offering some insights into the factors affecting success or failure in delivering transformational change in the NHS, previewing many of the concepts to be covered in the programme.

II. Building trust and understanding with others

When working to convince others to join us in a change it is easy to undermine our efforts by working from flawed assumptions. This topic discusses some practical approaches to building trust and understanding with others, moving towards a platform of commitment to change. Using some simple techniques we start to explore who you need to engage with, what you know about their goals in relation to your change area and how you can communicate about your programme to maximise buy-in, trust and commitment.

III. Working through distributed leadership and networks

The scale and complexity of transformational change means that it cannot usually be delivered through a model of centralised control. Instead we have to look towards new ways of working that involve a wider group of change leaders. This 'distributed leadership' approach brings with it some challenges that we explore such as how to create, support and

align these leaders and what it means to be a 'system leader' who is 'in command, not in control'. Taking a number of different aspects of distributed leadership we begin to plan what you can do to make this approach effective in your system, building on the latest thinking around system leadership and networks.

IV. Creating a vision

Visions are often seen as little more than catchy straplines or management rhetoric. In this topic we unpack what really constitutes a vision and how it can play a central role in transformation. We describe what we mean by a 'visioning' process and offer a simple approach for creating a vision with a team or group. We also discuss some of the attributes of a good vision and give you the opportunity to assess the current vision for your transformation or plan your process for creating one.

V. Effective action planning

This topic introduces a range of simple tools and techniques that support effective action planning. Starting with the two tools that many teams have found helpful in shaping their approach to action planning (i.e. 30/60/90 days cycles and 'taking two steps down'), we expand to include a range of simple techniques borrowed from Agile methods. These are then applied to actions arising from the programme.

VI. Understanding your system – sense-making with others

Healthcare systems are usually complex. Cause and effect relationships are unclear, different people have competing perspectives on the system's purpose (and what needs to change) and the on-going evolution of the system is shaped by stakeholder reactions to the changes we put in place. In this topic we therefore introduce a simple framework for making sense of your system with others to provide a platform for planning actions. Building upon ideas introduced by W. Edwards Deming, we use the lenses of system understanding, psychology, knowledge and variation as four perspectives that help build our understanding of our systems.

VII. Using qualitative intelligence

As an 'evidence based' service the NHS has made significant advances in using quantitative data and statistical analysis to determine best practice. It is also increasingly adept at using quantitative data for the purpose of improvement. However, its use of qualitative data is less advanced and often limited to specific contexts. This topic explores the role and benefits of

gathering qualitative data to aid our understanding of social systems. It expands upon what we mean by qualitative data, how it can be used to support change and the typical techniques that we might use in healthcare settings. In applying some simple principles you will start to identify the potential for increased use of qualitative data in your change programme.

VIII. Working with resistance to change

Resistance to change can be thought of as a response to loss (e.g. loss of status, relationships, services etc.) and a way to manage threat and anxiety. Taking a psychological perspective on resistance, this topic discusses how we can identify potential resistance and put in place arrangements to minimise its impact. Taking the position that resistance is a normal (and perhaps welcome) aspect of transformational change we work through a range of models, concepts and tools that can help in planning a change programme.

IX. Undertaking action learning and reflection

Donald Schön noted that much of the work we do as professionals occurs in those 'indeterminate zones of practice' where our taught learning does not directly apply. Change leaders therefore need to build their capacity to reflect and learn, developing new insights from their practice and that of others. Through action learning and guided study you will develop your own ability to reflect and support others who are on a similar journey.

X. Improving team and individual effectiveness

Transformational change is rarely delivered by a sole leader. It is often the result of the combined efforts of a change team. Whilst these teams might be fluid in their membership and go by many different names, it is clear that their effectiveness as a team is crucial to the success of a change. Here we offer a range of insights into how change teams typically struggle in their role, providing a range of tips for improvement. We also expand upon the simple principle that 'everyone is different' to explore how you can get the best from your team, avoid dysfunctional team behaviours and connect better with your team and wider stakeholders on a personal level.

XI. Acting as a leader of transformational change

Theories about leadership have evolved over time, moving from a belief that leaders are 'born not made' to more recent views that leadership style is contingent upon the context. Here we bring the concept of leadership up to date, discussing what it means to be a system

leader, to be authentic and to act with emotional intelligence. Building upon earlier ideas of 'burning ambition' we explore how you can act with emotional intelligence and some of the demands that will require resilience as a leader. You will get the opportunity to reflect on your own style of leadership and how you might need to stretch yourself to adopt new ways of being emotionally intelligent with the capacity to be aware of, control, and express one's emotions, and to handle interpersonal relationships judiciously and empathetically.

XII. Engaging through narrative

Traditionally leaders of change have been encouraged to be dispassionate and objective, putting their head before their heart. Unfortunately, the evidence shows that people don't always listen with their head and instead look for how the messages they hear from a leader align with their values and beliefs. They also look for signs that they can trust a leader, wanting to know what drives their push for change. Storytelling techniques have a long history in motivating people to change, exemplified powerfully by people like Martin Luther King and more recently by Barak Obama in his campaign for the presidency of the USA. In this topic we unpack the structured storytelling technique of public narrative as taught by Marshall Ganz (who guided much of Obama's campaign). Starting from the foundations of public narrative we initially develop our story of 'now', later building to include other elements.

XIII. Managing your programme

Various methods exist for designing and delivering change programmes. Within the NHS and wider public sector, Managing Successful Programmes (MSP) is the accepted standard and many organisations have adopted MSP in full or in part. In this topic we try to get to the heart of MSP-like approaches and explore how their techniques and activities can be viewed through the lens of complex, emergent change that often takes place across organisational boundaries in situations of significant uncertainty. Together we distil out the key messages and principles to plan how these can be applied in our change programmes.

XIV. Defining the principles of transformation

Expanding upon earlier discussions of what we mean by transformational change, this topic explores how we define transformation and the key principles that underpin the practice of transformational change. Discussing a range of good practice tips and building upon the 'wisdom in the room' we develop a range of practical ideas for how you can enhance your change programme.

XV. Exploring volatility, uncertainty, complexity and ambiguity

Increasingly it is recognised that one of the major challenges of delivering change at scale is the requirement to deal with volatility, uncertainty, complexity and ambiguity (VUCA). In this topic we define what these terms mean and discuss their practical implications for leading change in the public sector. In particular we will explore their implications for how we deal with risks, design projects and plan actions in our programmes.

XVI. Understanding the innovation process

Innovation is more than simple creativity - it is a process. Before ever getting to think creatively it is necessary to gather information to help define the topic for creative thinking. After generating ideas it is necessary to select the best, refine them, prototype them and eventually move on to piloting and implementation. In this topic we learn from some of the most successful innovators in industry to identify some of the simple techniques we can apply in our systems to ensure a successful innovation process.

XVII. Applying the tools of innovation

Within the process of innovation there are a range of proven tools and techniques that support the creation and selection of creative ideas. You will experience using a range of these tools that encourage broader thinking, helping you to get out of your existing 'mental valleys'. As a change leader you will see how to facilitate their use and explore the types of problems or situations where they offer most value.

XVIII. Creating a culture of innovation to support transformation

Having the right tools is just one enabler to support effective innovation. In this topic we discuss the seven key dimensions of culture that distinguish highly innovative organisations. Based upon a systematic review of the evidence we outline what works and offer practical ideas for creating a culture that supports innovation – and by extension, supports transformation. You will explore what you can do to support innovation both within your change programme environment and more broadly across your system.

XIX. Supporting dialogue and mapping polarities

Should care be provided conveniently close to home or in the safety of a large central hospital? Debates like these are examples of a particular type of problem known as a 'polarity'. In a polarity, we often end up describing something as a choice when in fact it is

actually a problem to be managed – with no definitive right answer. In this topic we define what we mean by a polarity and show how polarities are prevalent in nearly all transformational changes and are an inherent part of the change process itself. By mapping a particular polarity we will see how polarities can be identified and worked with in transformational change as part of supporting a move towards dialogue rather than 'either, or' debates.

XX. Developing driver diagrams to design programmes of change

Transformational change can involve hundreds of interrelated smaller scale projects yet too often we simply represent these as a long list without adequately showing how each project contributes to the overall goal. Driver diagrams are a simple yet powerful tool for explaining the logic model behind a range of projects. Created in a simple tree-like structure a driver diagram shows how projects link together to achieve higher level aims which in turn eventually come together to achieve an overall goal. Here we will cover how to create a driver diagram for your change programme and how it can be used as the basis for a measurement framework.

XXI. Assessing your project portfolio

Sometimes transformational change programmes inherit or accumulate existing projects to become part of the overall portfolio of change. In this topic, we look at how to assess projects across a number of dimensions to determine if they are fit for purpose. Using the IDEA approach we explore aspects of Innovation, project Design, the role of Experimentation and the Alignment between projects. Here you will develop your ability to critically assess your change projects and those that become part of your wider change portfolio.

XXII. Gaining understanding through systems thinking

The field of 'systems thinking' has been around for many years and is typified by the works of people like Peter Senge. In this topic we describe the basic building blocks of systems thinking, showing how feedback within organisations or wider systems can lead to unexpected or unwanted results. Using a number of examples and through introducing a range of commonly recurring system patterns (termed 'archetypes') we explore how you can apply systems thinking in your change work. You will start to identify some of the archetypes present in your system and see how standard change strategies can be applied.

XXIII. Role modelling

One of the most important things you do as a leader is to be a role model – and as a leader, people around you are constantly observing your actions and listening to what you say. You are therefore constantly acting as a role model whether you realize it or not. This topic area focuses on why role modelling is so important for leaders of system-wide change and encourages you to think about what that means for you as a system leader, a 'signal generator' – what are the values and behaviours you want to role model and how can you enhance your influence using role modelling?

XXIV. Culture change

Culture change can be the topic of a transformation or an enabler for wider transformational efforts. This topic describes what is meant by 'culture' and demonstrates two methods for mapping your organisational or system cultures in ways that allow you to shape your culture change activities. 'Rich pictures' are a visual method for conveying culture in ways that are not restricted by the limitations of written descriptions. The 'cultural web' provides a series of helpful categories for recognising and listing cultural artefacts to explore underlying paradigms.

XXV. Improving resilience

Transformational change can be personally demanding. As a leader you need to deal with uncertainty, ambiguity and the emotions of others involved in the change. Without resilience the temptation can be to give up or revert to command and control methods. This topic explores what we mean by resilience as the ability to bounce back and offers some practical ways of maintaining your own resilience.

XXVI. Metaphors for change

Traditional approaches to change are typically based on the metaphor of organisations as machines. Increasingly it is recognised that this metaphor is inappropriate for transformational change. This topic therefore offers a range of alternative metaphors that are used to explore new approaches to change.

Appendix B Taking a realist approach to evaluating TCSL programmes

This appendix explores how a realist approach can be used to evaluate programmes.

It introduces the realist terminology of action, mechanism, context and outcome and describes some of the challenges encountered in differentiating these terms when considering real programmes. It goes on to suggest some mechanisms relevant to this research.

The realist approach

Much of the terminology used in this section is drawn from the work of Pawson and Tilley (1997) who focus upon the realist evaluation of social programmes. Here, I extend their underlying realist descriptions to consider how realist principles can be applied to other activities and what this means for how we interpret research data.

As this research included actual 'social programmes' (i.e. the TCSL programmes) this section starts by considering evaluation as a topic before moving on to realism and its wider application.

Within the ACT Academy a non-realist based approach to programme evaluation has historically been used. This approach focuses on the four levels of assessment developed by Kirkpatrick and Kirkpatrick (2006) described in Table 10.

Level	*Description*
Reaction	Participant response to the programme (e.g. satisfaction)
Learning	The extent of changes in participant attitudes, knowledge or skills (e.g. understanding of change concepts or tools)
Behaviour	The extent to which a change in participant behaviour has occurred (e.g. their use of new tools or acting in new ways)
Results	The final results that occurred (e.g. greater scale, pace or sustainability of change)

Table 10: The Kirkpatrick evaluation levels (based on Kirkpatrick and Kirkpatrick, 2006)

The attraction of these levels for those involved in evaluation lies in their simplicity and their gradual movement from the realm of the programme (i.e. reaction) to the workplace (i.e. results).

Kirkpatrick and Kirkpatrick (2006) note some challenges associated with these levels that have to be addressed in each evaluation.

- Whether learning, behaviour change and results should be participant reported or objectively measured (e.g. through testing or the use of control groups).
- Determining when (and how often) to measure behaviour change and results following a programme.
- Deciding to what extent a measure of results constitutes proof or just evidence towards proof of programme effectiveness.

However, they go on to suggest that such programme evaluations are relevant not only in measuring programme outcomes but also in guiding us in "how to improve future programs" (Kirkpatrick and Kirkpatrick, 2006 p.19).

This assertion can be disputed in at least two ways.

Firstly, many programmes are designed to deliver change within complex system settings. In these it is suggested that 'results' are never definitively and unambiguously achieved (Stacey and Mowles, 2016). Results depend upon what you choose to measure and when you measure it. The potential for unintended consequences at some future point cannot be ignored (Bevan, Plsek and Winstanley, 2013). Secondly, it assumes measures of outcome are necessary and sufficient to guide programme improvement, failing to answer the question of "why and for whom and in what circumstances" does a programme work (Pawson and Tilley, 2004. p.26).

An alternative to the Kirkpatrick approach is offered by realist evaluation. This suggests that evaluation should be theory driven, explanatory and concerned with the processes by which action leads to an outcome. It also takes a broader view of outcomes, not just restricted to those that a programme is intended to deliver. Realist evaluation is concerned with four factors as shown in the top of Figure 101 with an example shown in the bottom half (based upon Pawson and Tilley, 1997).

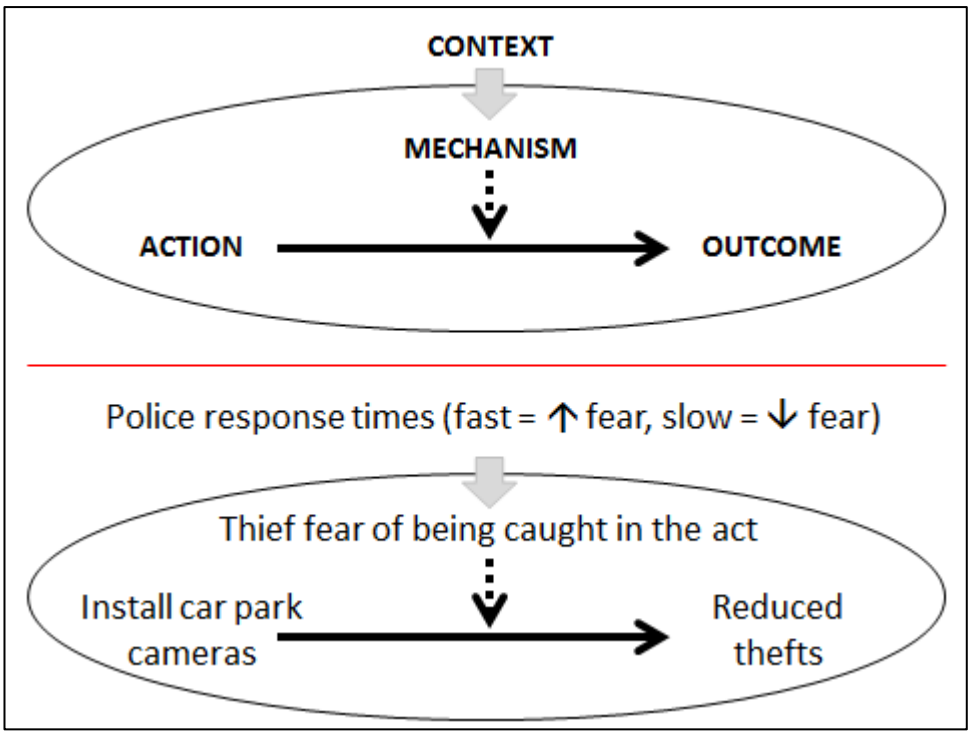

Figure 101: The terminology used in the realist view of action

Pawson and Tilley (2004 p.6) introduce the concept of a 'mechanism' in a social programme as "the process of how subjects interpret and act upon the intervention stratagem". Mechanisms may be unobserved but act to influence the choices of those who experience the programme (the subjects). In Figure 101, mechanisms are triggered (or disabled) by the actions within a programme and made more or less effective by the context of the programme. For example, installing cameras in car parks (action) may reduce thefts (outcome) by increasing the fear in thieves of being 'caught in the act' (mechanism) but not if they know that police response times are slow (context).

From this realist perspective, evaluation is therefore not just about measuring outcomes but also understanding how outcomes are created.

An example of a realist perspective applied to this research is shown in Figure 102. In TCSL programmes an action is to give teams time to plan. The intended outcome is that this leads to them doing different things back in their systems. However, how it leads to them doing different things could be down to various mechanisms as shown. Each of these mechanisms may be more or less relevant in different contexts.

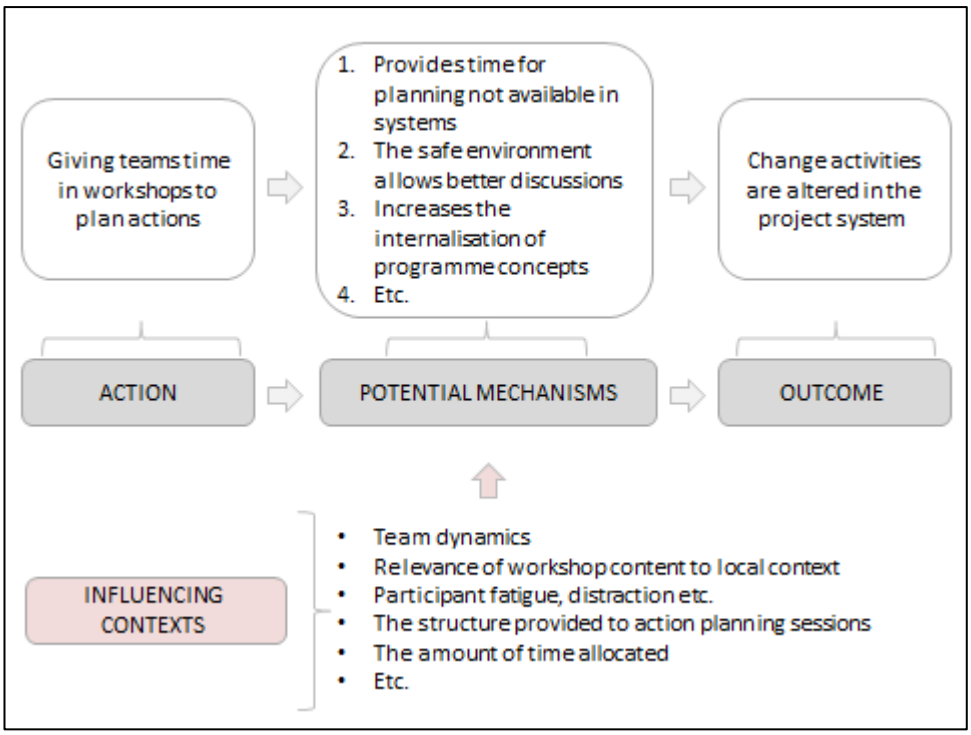

Figure 102: A realist evaluation example applied to this research

According to Hartley (2004) realist evaluation also offers the potential for analytic generalisation from case studies. Detailed understanding of mechanisms and supporting contexts can potentially be transferred between settings in ways that overall programme design cannot. This moves away from a reliance on the highly detailed 'thick descriptions' of Geertz (1994) which place an onus on the receiver to interpret transferability.

This realist perspective on the role of mechanism is also used by Robson (2011) and Pawson and Tilley (1997) to argue against experimental based evaluation processes (e.g. randomised controlled trials). They suggest that experiments are designed to selectively enhance or limit pre-identified mechanisms by controlling context. This is in effect designing the system to create a response rather than learning about its inherent mechanisms. From a complexity perspective Mowles (2015, p.8) offers a similar argument noting that, in pursuit of controlled conditions, experimental approaches ask participants "to behave like robots so they do not get in the way of the experiment". This is viewed as removing the "improvisational activities" that make social interventions work.

Pawson and Tilley (2004 p.9) suggest that in describing how programmes work it is helpful to refer to 'context-mechanism-outcome pattern configurations' (CMO configurations). These are defined as "models indicating how programmes activate mechanisms amongst whom and in what conditions, to bring about alterations in behavioural or event or state

regularities". CMO configurations therefore lock together the different elements of Figure 101 to help clarify the role that each element is playing.

However, adopting a realist perspective to evaluate programmes or to understand other types of action is not without its challenges. In particular differentiating between action, mechanism, context and outcome can be problematic (Jolly, 2014).

To understand some of this confusion it is helpful to consider a standard example used to explain the realist view in the literature. Robson (2011) describes the ignition of gunpowder. An action (a match) leads to an outcome (explosion) through a mechanism (chemical reaction) but only in certain contexts (e.g. dry gunpowder). However, this example could in different circumstances be rephrased as 'an action (drying the powder) leads to an outcome (explosion) through a mechanism (chemical reaction) but only in certain contexts (e.g. an ignition source)'. This effectively swaps the roles played by action and context.

Although this is only a simple example, it can be seen how different scenarios can lead to different views on what should be labelled as 'context'.

A further complication is added when there is a need for a chain of actions to deliver an outcome. Moving away from the simple gunpowder example and closer to the content of this research, it is helpful to consider a simple change process. Conklin (2005) describes the most common model of change as the 'waterfall model', shown on the left of Figure 103 where change activities move through four stages. On the right of the figure these stages are reinterpreted in realist terms as a chain of actions (i.e. 'gather data' etc.).

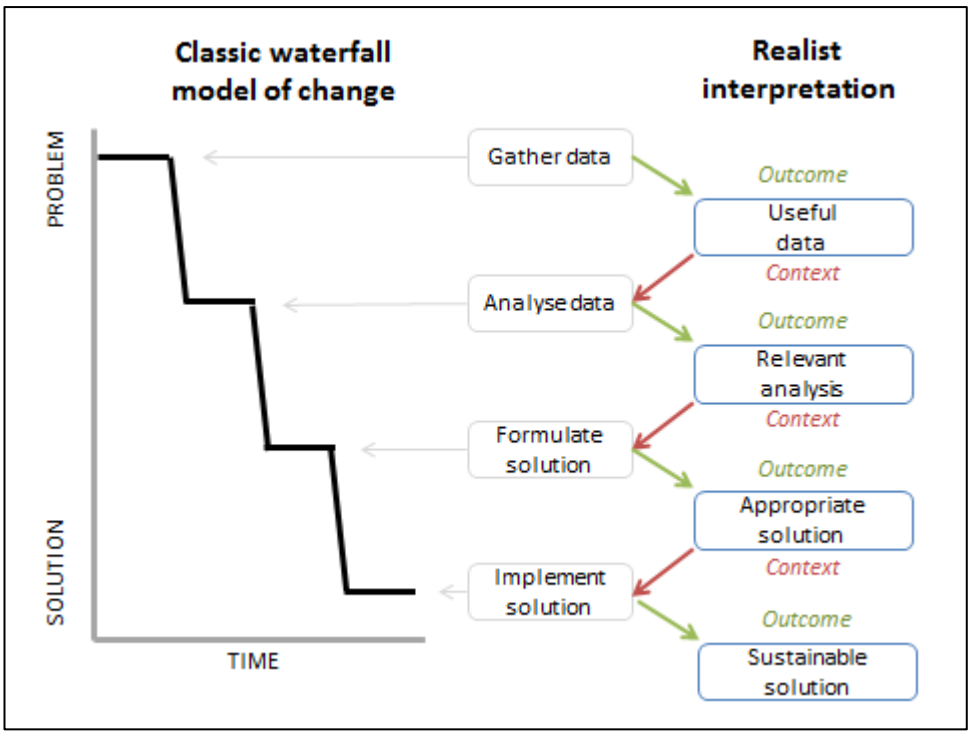

Figure 103: The classic waterfall model of change and a realist interpretation of it

Here the action of 'gather data' leads to an outcome of 'useful data'. This usefulness is determined by the mechanisms and context relevant to 'gather data'. The outcome of 'useful data' forms part of the context for the next stage in the process of 'analysing data'. Analysis is only helpful if 'useful data' has been achieved and will depend on the nature of this data. Analysis will also have its own set of mechanisms and other contextual factors. This chain continues into the other stages shown in the figure.

In Figure 103 each outcome of a stage creates some of the context for the mechanisms of the next stage. Outcomes and context can therefore sometimes also be considered interchangeably.

Further complication occurs when multiple actions (and their associated mechanisms) can happen in parallel in complimentary ways. For example, in attempting weight loss, two core actions can be defined as 'reducing calorie intake' and 'increasing calorie expenditure'. Both independently can lead to the outcome of weight loss. But reduced calorie intake only works if calorie expenditure stays stable (or does not decrease). The same is true in reverse. So, the action of 'dieting' only works if it does not coincide with 'taking less exercise'. In this way the two actions in effect provide a context for each other.

These complications do not invalidate the realist view of generative causation, but they make the task of understanding and describing the relationship between actions, mechanisms, contexts and outcomes more difficult.

Further identifying CMO configurations is an interpretive as well as analytical process as the language of CMO configurations is not the natural language that people use in describing what they do. For example, people may talk about action but omit the outcome it was intended to achieve or describe the importance of an element of context yet omit the mechanism that it influences.

In this research I have therefore tried to refer to what has been learnt about CMO configurations where possible but have accepted that ultimate clarity is not always possible. This has included hypothesising some CMO configurations based on incomplete data. However, such an approach of suggesting CMO configurations is a necessary and accepted part of theory building within the realist view. For example, Best et al. (2012) have used this approach in their realist review of studies of transformational changes undertaken in healthcare settings.

Table 11 shows some of the mechanisms identified as implicit in the programme design activities of the faculty, typically based upon faculty experiences of working with groups or their knowledge of adult learning practices.

M1	By increasing participant knowledge and skills related to the content they are more likely to apply the content in their change programmes
M2	By enhancing teamwork and team understanding, participants will feel more confident to collectively apply the content
M3	By providing dedicated time to work as a team, participants will be able to plan future application of the content
M4	By encouraging stimulus through peer interaction, participants will gain insights into how to apply the content
M5	By structuring team conversations to promote new forms of dialogue, participants will gain appreciation of the value of the content

M6	By including activities based on the content, participants will directly apply it to their change work and are more likely to use the content later
M7	By including activities based on the content, participants will directly apply content that they would otherwise not use in their local context
M8	By building participant resilience, participants are more likely to use the content in the face of local resistance or challenges
M9	By supporting participants to reframe problems they will see more opportunities for using the content
M10	By providing dedicated time for reflective practice, participants will identify opportunities for using the content
M11	By building personal confidence or feelings of self-efficacy, participants will be more willing to take risks in using the content
M12	By challenging participant assumptions about change models (e.g. mechanical change), participants will adopt more of the content
M13	By creating their own change model based upon the content, participants will be more confident in adapting the content to their local context
M14	By having ways to articulate the content to others, participants will be able to implement more content locally

Table 11: Hypothesised TCSL design mechanisms

All of the mechanisms in Table 11 are the 'theories incarnate' in the design of TCSL programmes. Table 12 suggests a few less supportive mechanisms that the faculty has hypothesised that programme designs may sometimes trigger.

M15	By attending an external programme, feelings of 'a day off from work' are triggered and so participants disengage from the programme
M16	By undertaking discussions in a workshop outside of the workplace, feelings of 'this is not real work' are triggered and so discussions are superficial or decisions are later reversed

M17	By hearing lots of new concepts that challenge existing change practices, feelings of defensiveness are triggered that prevent full exploration of the concepts

Table 12: Additional hypothesised TCSL design mechanisms that inhibit learning

Some examples of contexts relevant to the programme design mechanisms are suggested in Table 13 based upon faculty discussions. These are shown separately and not as CMO configurations as many of the contexts listed are assumed to impact upon most of the mechanisms in Table 11.

C1	Authority of team members: More senior teams may have more authority and scope to try different approaches to change
C2	Distractions: Participants may be distracted from learning about the content (e.g. due to workplace or home problems)
C3	Completeness of team: Team mechanisms may fail if the team does not represent the key stakeholders
C4	Team or group dynamics: Dynamics within a team or across the teams in a cohort may act to inhibit learning and discussion
C5	Existing mindsets: Participants may have strong existing views about change methods
C6	Reflection time: Participants may not have the capacity to consolidate learning through reflection
C7	Personal goals: Individuals may view the programme as educational rather than project related
C8	Project complexity: For less complex projects the relevance of the programme content may be lower
C9	Project stage: For projects as different stages in their life-cycle the relevance of programme content may be different

Table 13: Hypothesised contextual elements surrounding TCSL programmes

However, some of the contextual factors in Table 13 are also matters of debate between faculty members (as discussed in the body of this report). These are captured as opposing views in Table 14.

1	Participants must be senior (director level). • Seniority allows for firm workshop-based decisions that can be enacted in systems. • Seniority provides a broad system perspective.	Participants can be junior (sub-director level). • Transformation is often enacted through influence, seniority is less relevant. • Seniority provides a perspective but others are equally valid.
2	Participants must attend as teams reflecting key stakeholders. • TCSL offers the benefit of team development. • Decision making requires the consensus of stakeholders.	Participant 'teams' need only represent a coalition of the willing. • A 'team' will never be complete and thus TCSL inevitable has to deal with missing members and incomplete decision-making powers.
3	Participants need a well-defined project that spans multiple organisations to meet the definition of transformation. • Transformation is by definition multi-organisational. • The power structure of single organisations reduces complexity in ways that make TCSL content less relevant.	Participants need a project of sufficient complexity to challenge mechanical change paradigms. • Despite power structures, single organisations can be sufficiently complex to make influence rather than control the dominant change mechanism.
4	Participants learn most where taught content is distributed over time. • Participants cannot assimilate all TCSL knowledge at once.	Participants need taught content as soon as possible. • All taught content is relevant throughout a change programme.

	• Delaying interactions with participants allows time for them to gain learning from applying earlier content as they learn later content.	• Delaying content risks gaps or inconsistencies in practice.
5	Participants require a workshop environment that prioritises theoretical content. • TCSL requires significant knowledge exchange from faculty to participants. • Participants adapt their practice when they hear a persuasive argument for change.	Participants require a workshop environment that prioritises discussion. • Participants require only enough theoretical input to facilitate discussions. • Discussion and action are more important than strict adherence to theoretical concepts.

Table 14: Design debates occurring within the faculty

Appendix C Exploring change and complexity

This appendix describes my explorations of change and complexity. It represents a personal sense-making of some of the diverse literature surrounding both topics and draws upon my experiences in this research.

Introducing the exploration

The concepts and perspectives presented here grew organically throughout the course of this research. They arose because as I sought to develop TCSL I had to also enquire into my own professional understanding of what I was teaching. This reflexivity increased in writing this thesis, the process acting as a catalyst to bring my thoughts into a coherent form.

In retrospect I realise that a range of inter-related questions were underpinning my enquiry into my professional understanding.

One set of questions was about the nature of complexity. I struggled to understand how complexity arose in systems and its relationship to the interaction of system components and the influence of people in systems. I was also curious about the role played by our perception or understanding of the systems around us when attributing complexity to a system. This prompted me to start questioning what we mean by a 'system' and whether it is counterproductive to describe a system separately from its properties. This further allowed me to consider how complexity might be understood from the perspective of our attempts to change system properties rather than seeing complexity as a system property in its own right.

Another set of questions emerged as I sought to understand the different system types portrayed in the change literature. In that literature, 'complex' systems were described as qualitatively different from 'complicated' systems yet how a system changed from one to the other was unclear to me. I started to consider if this change might not be a distinct phase change like water turning to steam but instead a more gradual alteration of something about a system, blurring the distinction between complex and complicated. This reinforced questions for me about whether these states were objectively defined conditions of a system or dependent upon the knowledge of the observer. In a parallel line of enquiry I also explored why I felt uncomfortable with drawing a hard division between the change skills used in small scale incremental improvement and those skills employed in transformation. I wanted to understand how the context of change altered as scale altered.

From these questions and many others my views on change and complexity emerged, initially as separate ideas awaiting connection. The writing of this thesis acted as the catalyst to bring them together.

Here for clarity I present my views as five related topics.

1. An action-based model of transformational change is developed. This was used in Section 12.1 to underpin a revision of the nine factors framework.

2. A new perspective on complexity is offered suggesting three distinct ways in which complexity can arise.

3. A language for describing change in complex systems is presented. This then provides a foundation for bridging perceived differences between planned change (simple or complicated) and change in complex systems.

4. A visual way of describing complex systems is explored as a basis for further understanding the processes of change.

5. Insights from these areas are applied to critically review two models from the literature that apply a complexity perspective to system change.

1. An action-based model of transformational change

An action-based model of transformational change was developed in order to underpin the review of the nine factors framework (Section 12.1). This section describes the detailed development of the model and how it was created through the iterative adjustment of a change scenario.

An early decision when creating the model was to structure it around a simplified, but realistic, representation of those involved in major changes. This recognised four groups as shown in Figure 104 (where group membership can overlap and change over time). TCSL programmes are predominantly aimed at those described in the figure as ‘core leaders’ (i.e. those with some formal oversight role in the change programme).

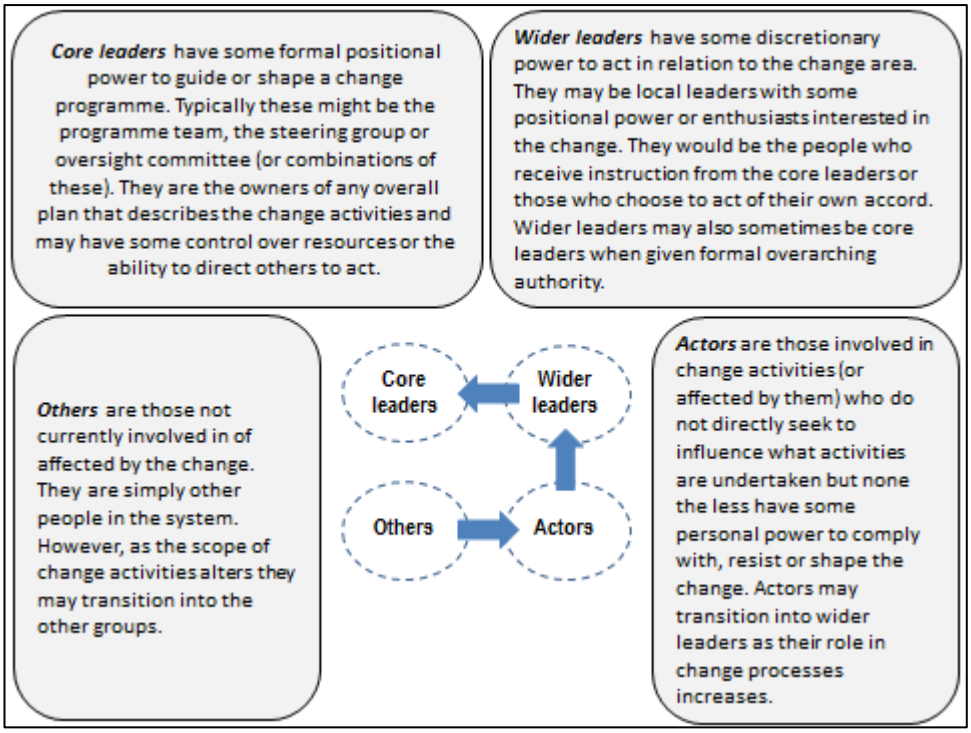

Figure 104: Four groups relevant in the transformational change model

The language used in Figure 104 is deliberately different from that used elsewhere in the literature to avoid any unwanted connotations. However, 'core leaders' and 'wider leaders' are closely related to the 'designated' and 'distributed' leadership groups defined by Best et al. (2012).

In developing the model, the perspective of core leaders was taken as a starting point as these most closely resembled the role taken by TCSL participants.

To begin to build the model an early thought experiment was to consider an idealised scenario for planned change (to later add in complexity). This scenario represented a situation with no resource constraints, a single goal, just one core leader and the possibility of perfect knowledge of cause and effect (i.e. no complexity).

In this scenario just four conditions are necessary for successful change.

- Knowledge of the goal (i.e. something that measurably defines the desired outcome for successful planned change).
- A description of a system state that would represent achievement of this goal (i.e. a suitable endpoint of the change process).
- Understanding of the current system state (i.e. the starting point).

- Knowledge of cause and effect to be able to plan a series of actions to predictably alter the current state.

As the focus is on creating an action oriented model, Figure 105 shows four action areas necessary to create these conditions.

- 'Identifying goals' is the action of deciding upon the goal or goals of the change process (here allowing multiple goals in readiness for later iterations of the model).
- 'Creating direction' is the action of identifying one or more suitable end states for the system (that achieve the goals).
- 'Intelligence gathering' is the action of collating information about the system.
- 'Sense making' is the action that both provides understanding of the current system state and creates understanding of cause and effect linkages.

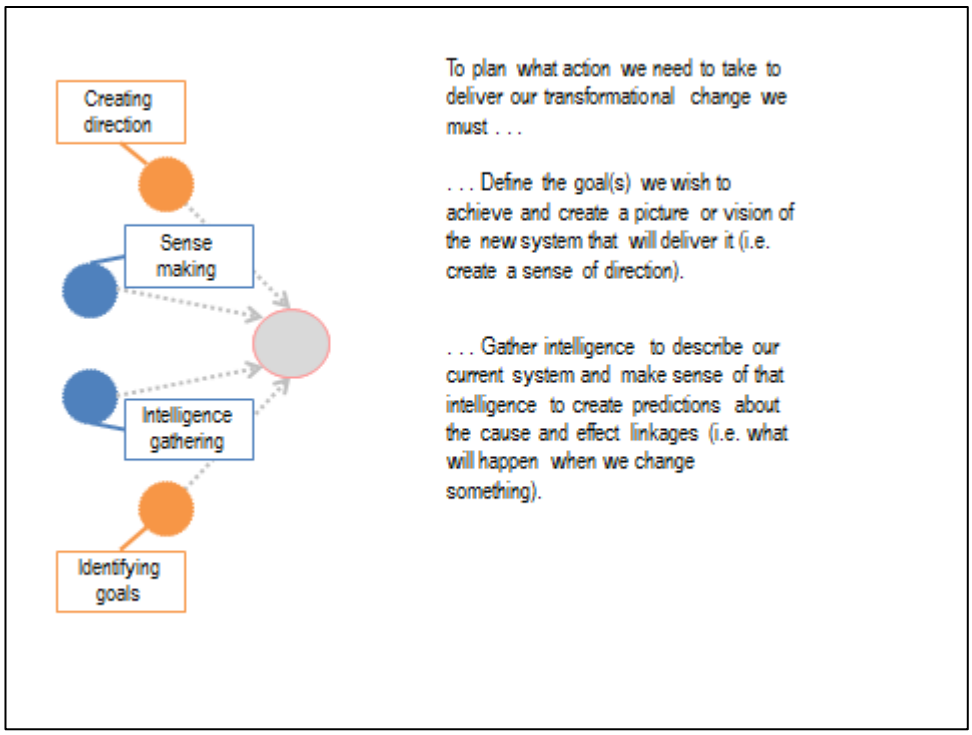

Figure 105: The basic scenario and its four action sets

The actions shown in Figure 105 are described in this way so that they can be related to recognisable real world activities without assuming any specific methods or constraints (e.g. bearing similarities to activities like goal setting, visioning, gathering data and analysis).

These actions create the possibility that multiple different routes to the desired future state might be possible (i.e. creating options for change). This in turn suggests a final action in this

simplified scenario to decide which of these options to pursue. The outcome of creating options and selecting between them are shown in Figure 106.

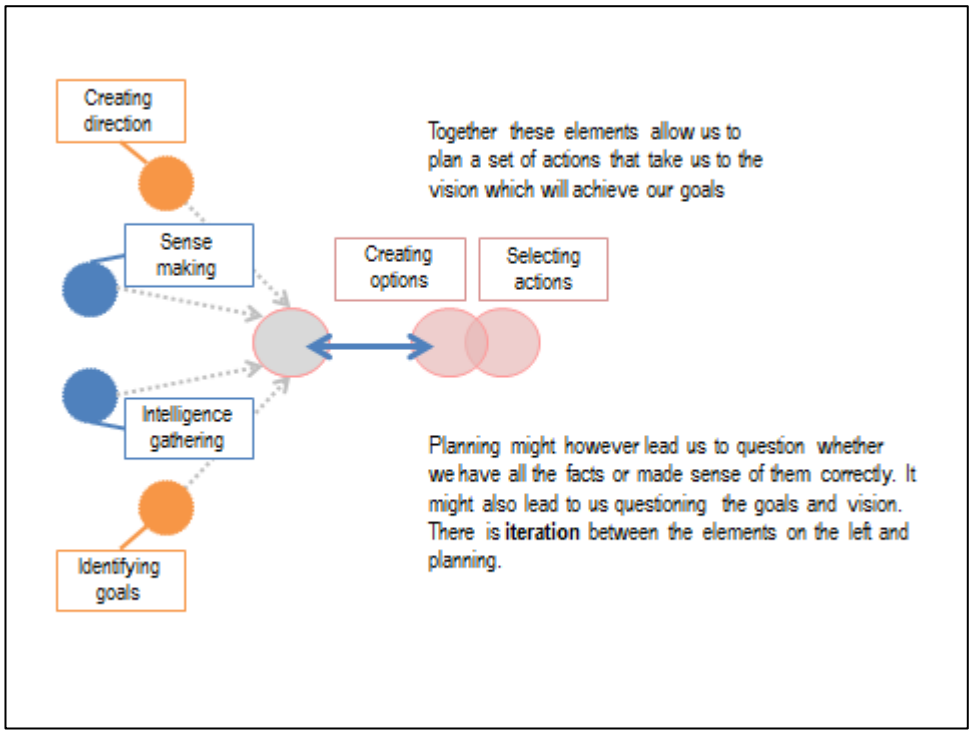

Figure 106: The planning elements added to the basic scenario

In the figure a double headed blue arrow is shown to indicate that this can be an iterative process that moves between planning which actions to take and the original four actions which generated the options. This might occur, for example, if no viable options can be found or important intelligence is missing that is needed for planning. This arrow therefore introduces some limited real-world constraints on the process, for example that

- 'intelligence gathering' cannot involve gathering every possible piece of data (or that 'sense-making' can analyse this data in every possible way),
- there may be contextual limitations on the process (e.g. resources may be inadequate to pursue the identified options), or
- revision of the identified goals may be necessary if no potential options exist for achieving them.

In this basic scenario the perfect knowledge of cause and effect means than planned actions, if implemented correctly, should lead to success. If allowance is made for imperfect implementation then a feedback loop is required from the actions back to 'Intelligence gathering'. This allows a comparison between planned outcomes and actual outcomes to

inform a new round of actions. This monitoring loop is shown in Figure 107 and is similar to the PDSA cycles of improvement science (see Langley et al., 2009).

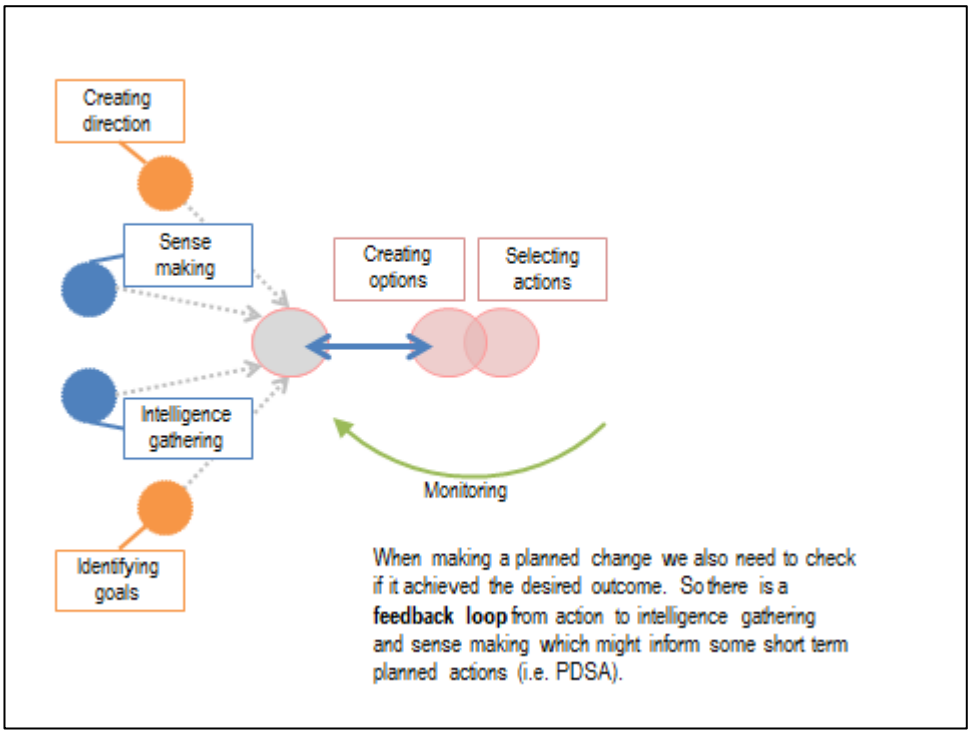

Figure 107: The monitoring loop added to allow for imperfect action

With imperfect implementation, change ceases to be a linear process of planning and implementation (as shown in the 'waterfall model' earlier in Figure 103) and becomes a cyclical process of goal attainment.

Since an aim is to create an action-oriented model of change it is appropriate to now consider the types of action that might arise from the processes shown above. This would then shed light on the nature of the decision-making process at the centre of the figure.

In the basic scenario, two initial action types can be defined as shown in Figure 108. Actions can represent a direct step towards the final state (e.g. a changed process). This is here called 'Directing system change'. Alternatively, actions can be enablers of such change (e.g. the gathering of necessary resources), here called 'Acting on constraints' (i.e. the constraints that limit direct system change). 'Acting on constraints' would also include action on contextual factors (reflecting the realist discussion of Section 5.2).

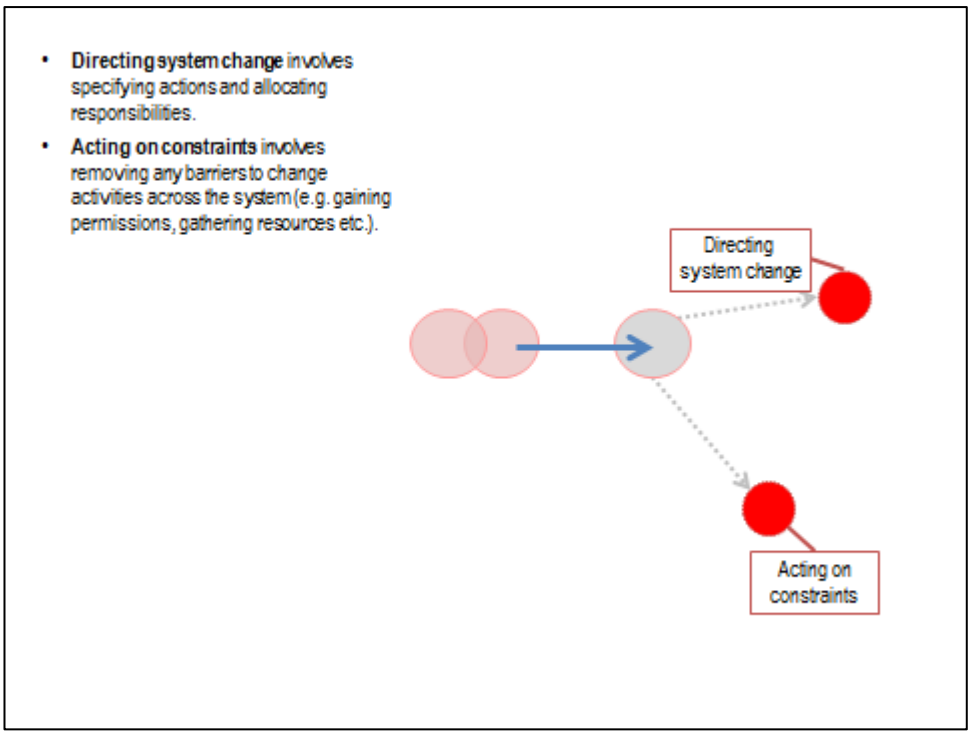

Figure 108: Two types of system change oriented action sets

Figure 109 adds to these an action set associated with the oversight of the change process. This is labelled 'Managing the programme' and would include actions such as managing the action planning process, creating criteria for choosing between routes or (in an imperfect implementation world) setting up and managing the processes for ensuring the quality of actions. This recognises that some actions need to occur to manage the process of change. Here the decision processes related to these actions are included in the central elements of the figure, expanding the planning process undertaken there.

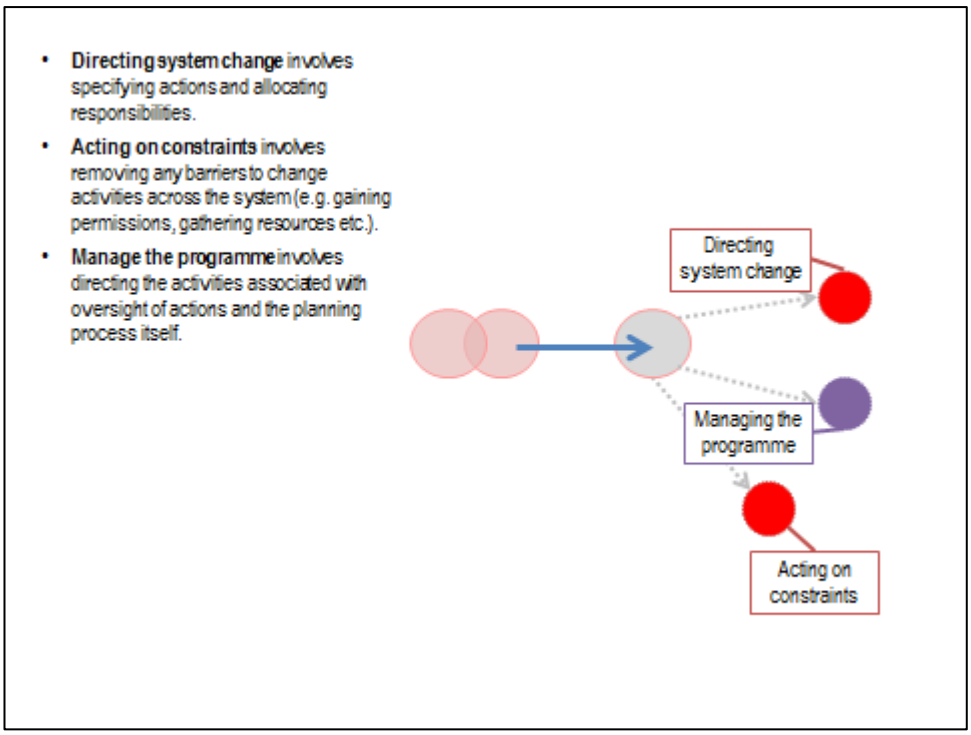

Figure 109: The inclusion of oversight of the change process

The basic scenario can now be altered by beginning to include the impact of having more people involved in the change process.

A first step is to include 'wider leadership' (described earlier) as shown in Figure 110. If this group is defined by their quasi-independence and discretion to choose their own actions, then the relationship of the core to them is different from that implied by the 'Direct system change' type actions (which implied direct central control of actions).

Here, when working with wider leadership, the core role can be described as 'Shaping local action'. This could include

- setting objectives and inviting wider leaders to turn these into local actions, or
- seeking to influence actions that wider leaders might be undertaking anyway in their part of the system.

This 'shaping' is therefore distinct from 'directing' as it primarily seeks to empower and align rather than control.

Figure 110 also shows another action type of 'Supporting wider leaders' which captures actions that (for example) might be associated with developing their capabilities or providing

them with resources (e.g. data). Like 'Acting on constraints' it represents an intervention to enable action.

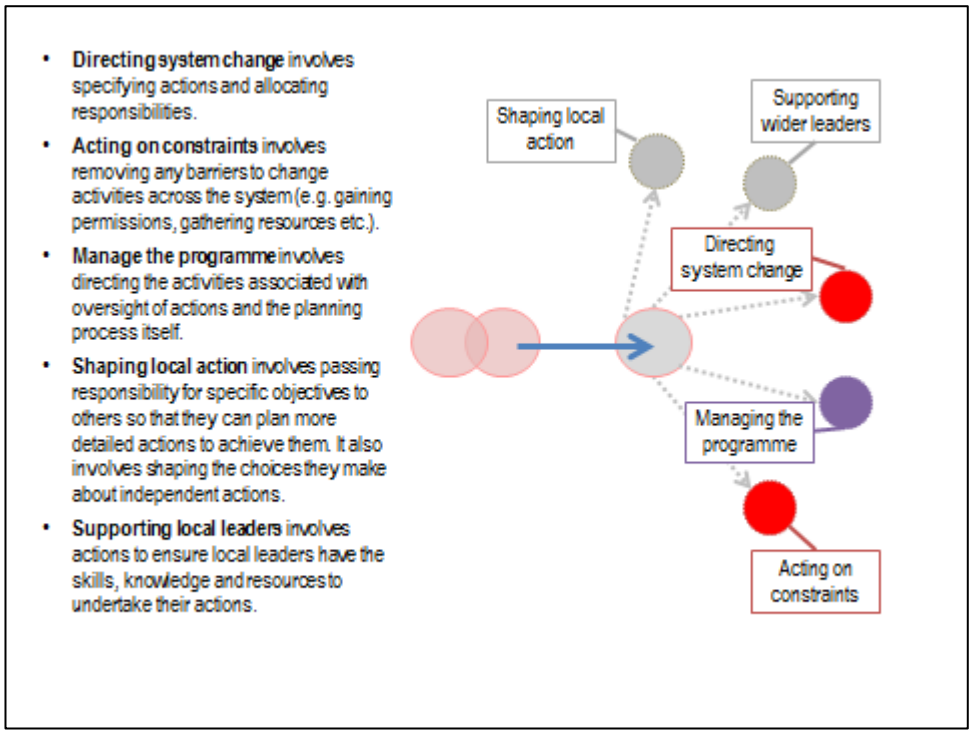

Figure 110: Adding wider leadership to the basic scenario

If the scenario is further developed to allow for more than one 'core' leader then another action type can be added to produce Figure 111. This is called 'Developing the core' and encompasses actions that focus on the ways the core leaders work together. This would include how they functioning as a team, how they make decisions or how they change their membership. As an example, an action (again arising from the centre of Figure 111) might be a decision to add more core members to bring specific knowledge or authority into the core group.

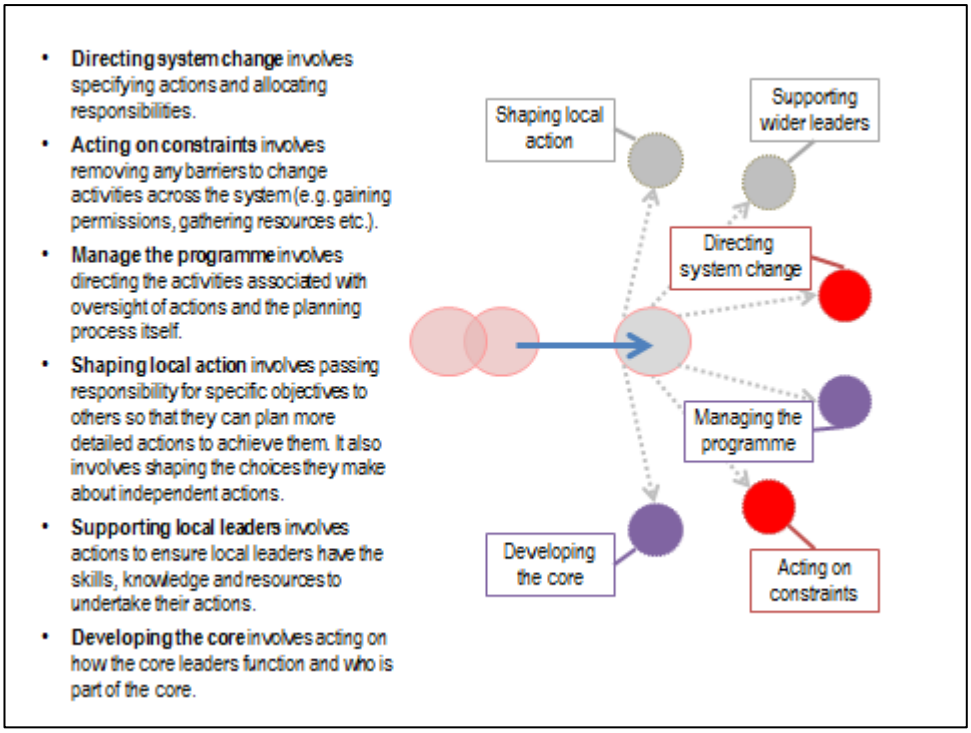

Figure 111: Adding additional core members to the basic scenario

Expanding the core also complicates the earlier activities shown on the left of Figure 107.

In particular it introduces the possibility of differing views on goals (or endpoints) and the potential for disagreement over the sense-making of intelligence. A process is therefore needed that achieves enough alignment for decision making and is shown as two new elements in Figure 112 called ‘Building trust’ and ‘Aligning perspectives’. These two actions are identified separately in order to distinguish alignment actions that are reliant upon good relationships (developed through ‘Building trust’) from alignment actions that may be authority or logic based.

In the change literature these processes are sometimes combined as creating ‘shared purpose’ (Bevan, Plsek and Winstanley, 2013) but for clarity are here maintained as separate but related activities to reflect how relationship building may occur separately from seeking alignment.

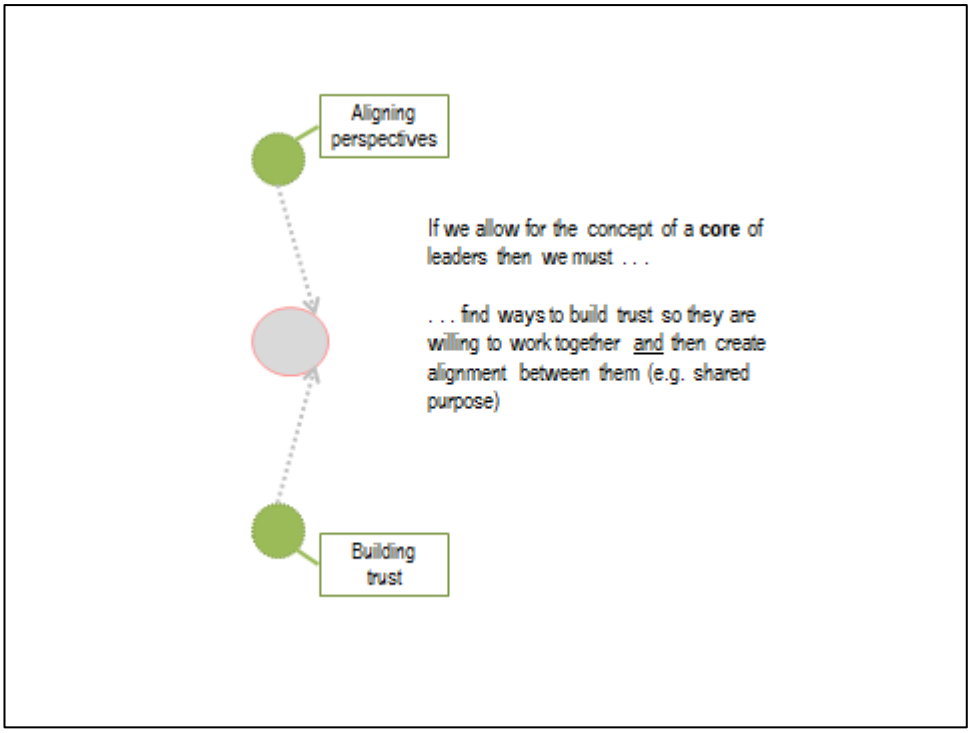

Figure 112: Reflecting the need for alignment to allow decision making

Figure 113 now shows the earlier images combined.

It also adds to both sides of the resultant image a set of actions termed 'Widening involvement'. These actions represent how the core works with others in the system that have the potential to impact on the change processes. It recognises that the core does not have all the knowledge or power necessary for omnipotence and thus to a degree all action is negotiated. It also includes any actions to create 'wider leaders'. In Figure 113 'Widening involvement' is shown as a dotted line surrounding other actions to show how it might be reflected in how these other actions are undertaken. The dotted lines do not include the central decision-making processes as these are assumed to be the remit of the core.

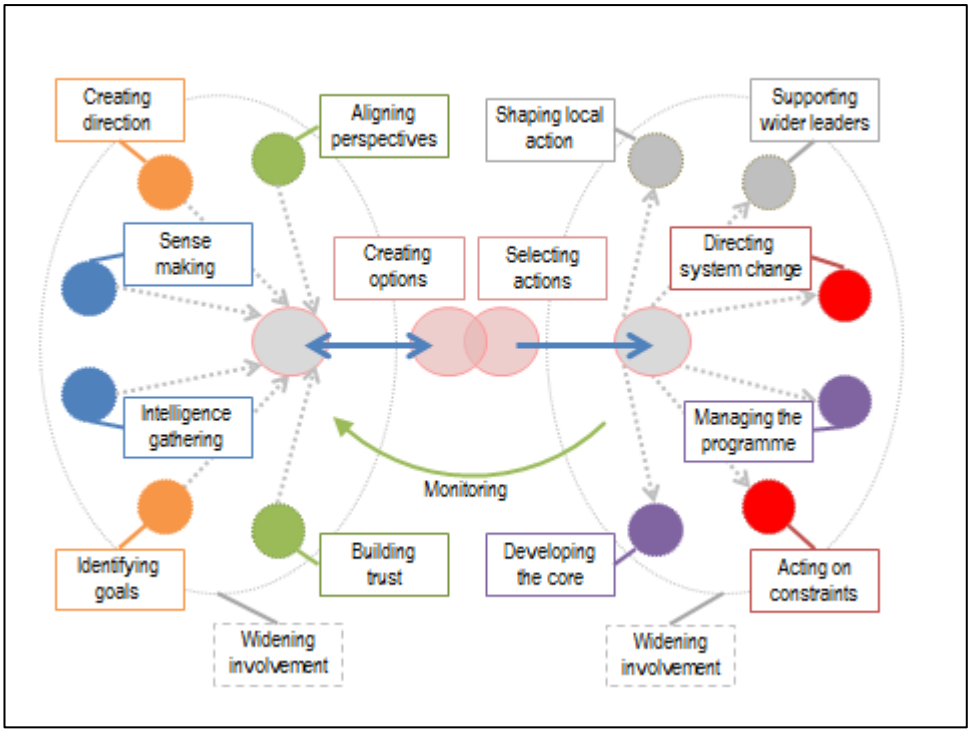

Figure 113: Both halves of the revised model

Figure 113 requires two final refinements to be complete.

Firstly, when the scenario was updated to include 'wider leaders' on the right of the model it did not consider how their existence affects the left side of the model. On the left side, the assumption had been that the actions undertaken there flow into the core based planning process to then create the core based actions on the right. However, the activities on the left are not restricted just to the core and may be mirrored (or even involve) the wider leaders. Therefore, the independent decision making ability that defines the wider leaders may mean that there is a planning process that bypasses the central elements of Figure 113. In effect this reflects how wider leaders will make up their own minds about actions irrespective of what the core does.

A direct link (in purple) is therefore shown in Figure 114 between its two halves to indicate how some decision making can occur outside of the direct control of the core.

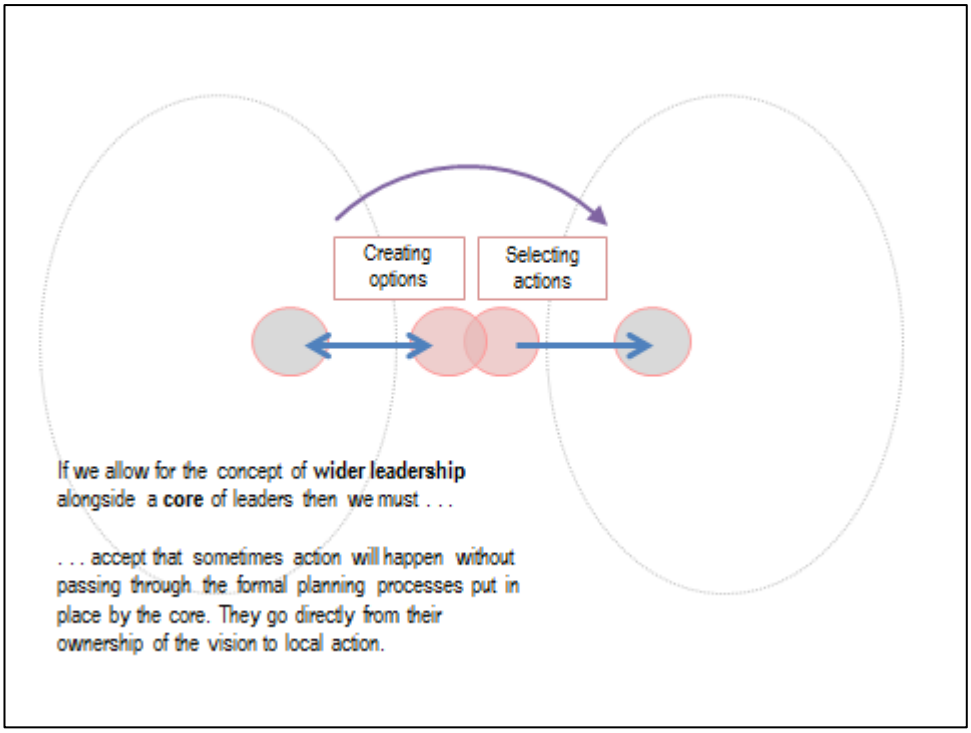

Figure 114: Including the implications of wider leadership based decision making

Secondly, in building the model so far, uncertainty has only been included in a limited way as an improvement-type monitoring cycle. However, uncertainty can arise in various ways, for example

- from the unknown action choices of wider leaders,
- because of limited intelligence (data),
- due to residual differences in the alignment of perspectives (between core or wider leaders),
- through external system influences (e.g. the impact of other change programmes, national policies etc.), and
- because of imperfect knowledge of cause and effect due to the complexity of system interactions.

Collectively these mean that the central processes of 'creating options' and 'selecting actions' are limited. Importantly it serves to reframe their outputs from action plans to action intentions and introduces the potential for experimentation.

This uncertainty means that another feedback loop is required connecting the right to the left which represents the on-going monitoring of the system as it evolves. This is distinct from

the specific action-oriented monitoring added earlier. Both monitoring loops are shown together as the curved arrows in Figure 115.

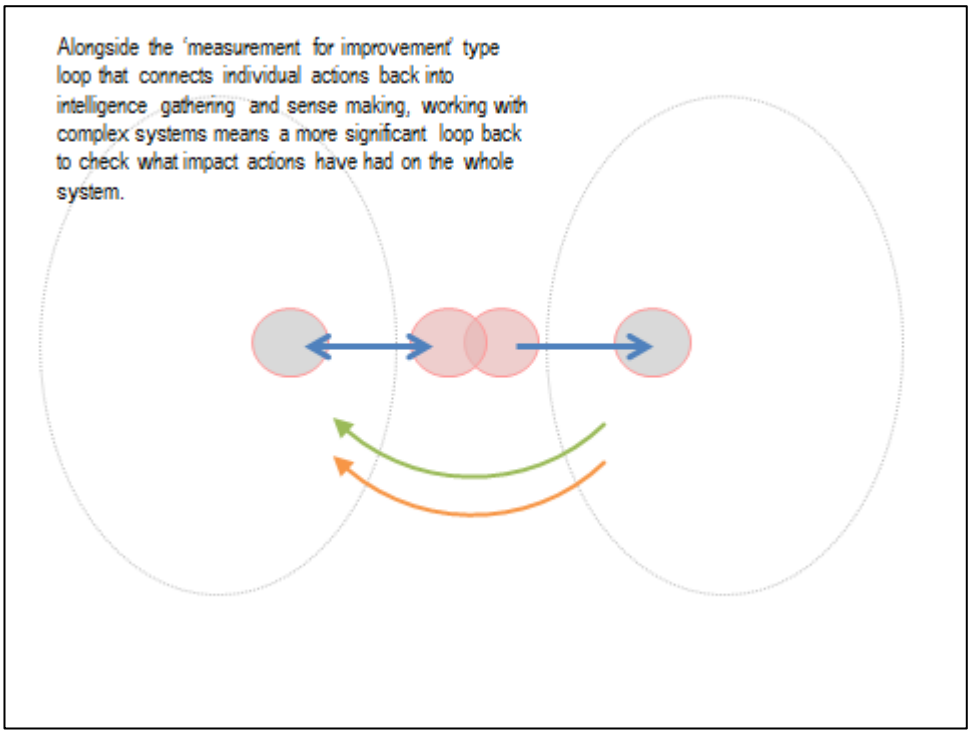

Figure 115: Including a futher monitoring loop to allow for system uncertainty

The complete change model is shown in Figure 116.

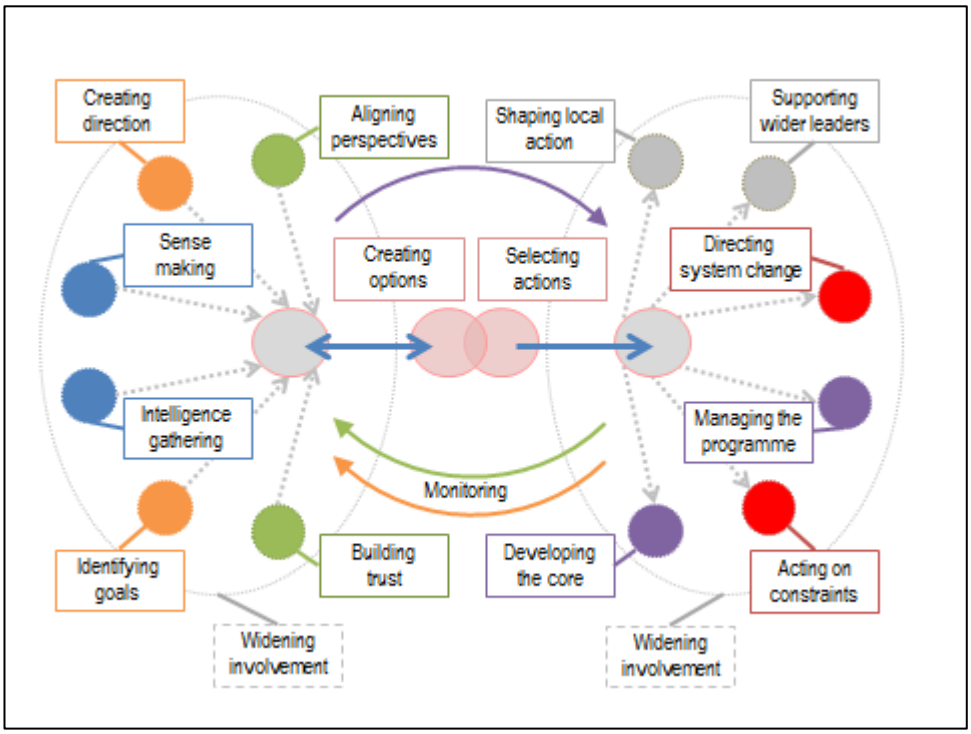

Figure 116: The transformational change model

A different way to visualise the transformational change model (retaining the same content) is shown in Figure 117. This helps to make clear that the role of the central planning process has to be broadened to consider the full range of actions that are open to the core leaders. Therefore, all of the 12 action sets around the edge are considered in the central planning process (with 'wider engagement' included as an additional common action set shown as the dotted line linked to all the action sets).

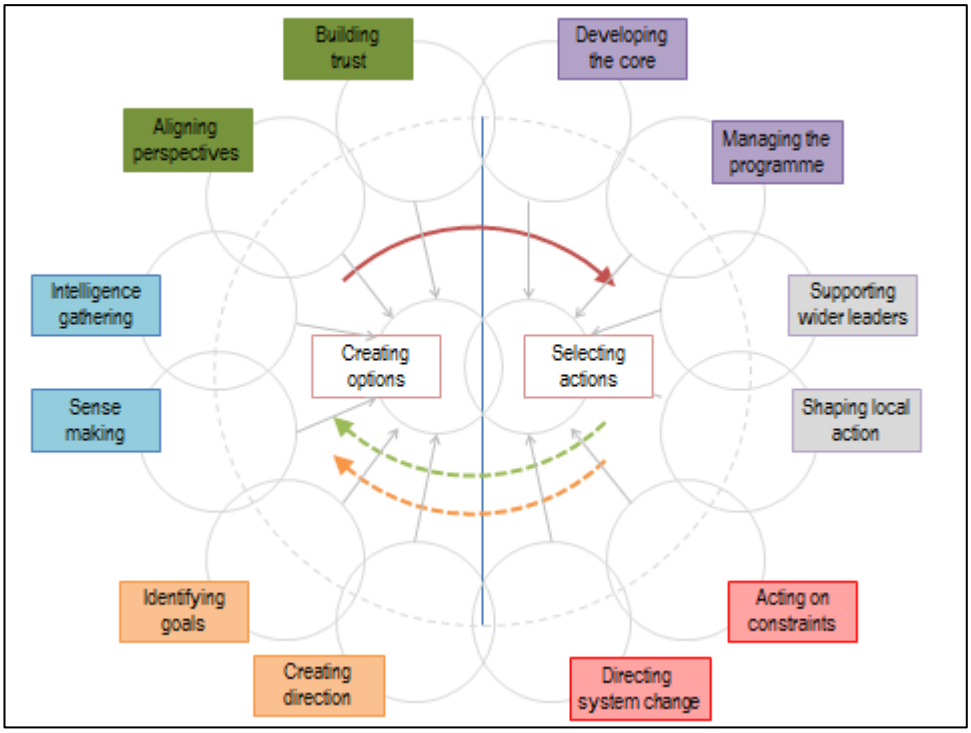

Figure 117: An alternative presentation of the transformational change model

Such a view of the model provides a helpful way of thinking about transformation since it positions transformation leadership (by the core or wider leaders) as an on-going choice-based process of selecting between a limited group of action sets, with learning provided by the monitoring cycles.

2. The causes of complexity

In the change literature it has become common for some systems to be identified as 'complex'. In such systems new approaches to change are suggested that do not rely on knowledge of cause and effect (e.g. the need to 'probe' complex systems described by Snowden and Boone, 2007). Yet across the complexity-oriented literature the reasons why complexity exists are not described consistently. Grint (2008) talks about multi-faceted 'wicked problems' ascribing various characteristics to such problems. Mowles (2015) draws

attention to the role of paradox and the associated difficulty of reconciling opposing actions or goals. McCrystal et al. (2015) describe a fluid, fast moving military situation with multiple interacting parts that could not be managed using traditional command and control methods. Common across these descriptions is that complexity is not seen as just a system feature but instead occurs in the context of an attempt to change or control a system. It is therefore suggested that it might be more appropriate to talk about 'complex change' rather than complex systems per se.

With such differing descriptions of complex change it is unclear to what extent the change advice from different authors is transferrable across settings. I have therefore attempted to re-interpret that change literature to suggest three distinct causes of change complexity as shown in Figure 118.

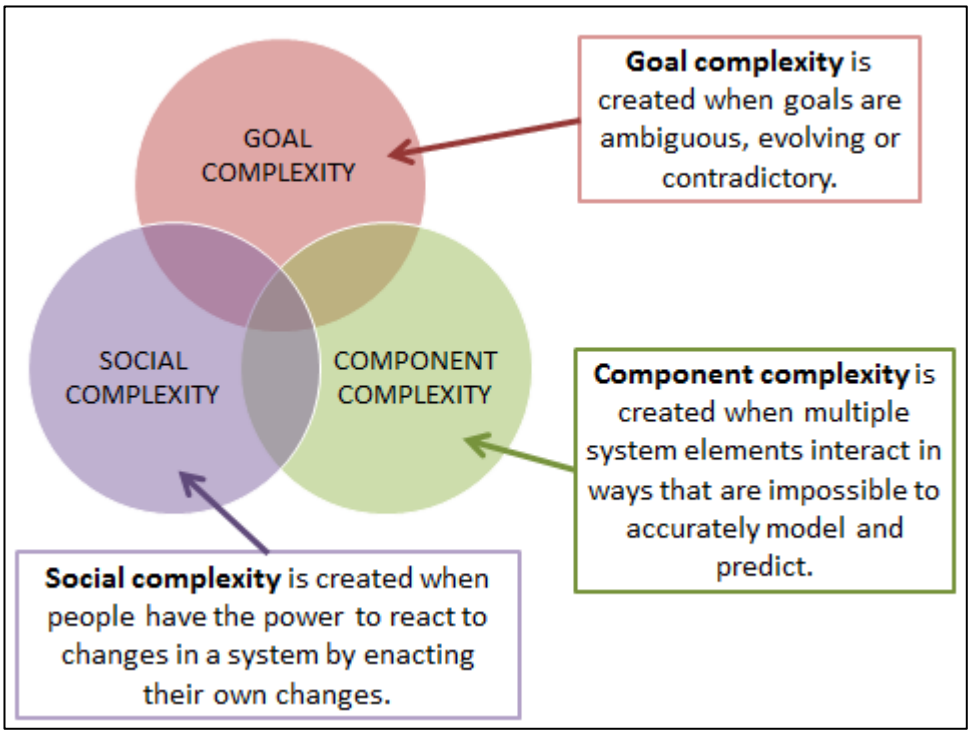

Figure 118: Three suggested causes of complexity

Of the causes shown 'component complexity' comes closest to the common description of complexity found in the literature (e.g. in Sweeney and Griffiths, 2002). Here a system has so many parts interacting in non-linear ways that system properties can only be described as patterns without detailed predictability. Change is 'complex' because this lack of predictability means it is impossible to determine with certainty which parts to alter to achieve a desired outcome.

Alongside this I suggest a different cause of change complexity that I label 'goal complexity'. Here it is impossible to determine which part of the system to change because the new desired system properties are ambiguous, contradictory or changing over time. For example, if our goal is 'improved quality', the ambiguity in this goal means we have no clear endpoint that can be used to identify what actions are required. In this scenario, people may agree with the goal in general terms but hold different interpretations of it that lead to contrary actions. Alternatively, it is possible to have contradictory goals coexisting in a change process. For example, wanting localised services with all the benefits of centralised services. Again, this may lead to contradictory actions with the paradoxical situation where an action might move us closer to one goal but further from another. This tension is part of what Mowles (2015) refers to in his exploration of paradox. Similarly, if goals change over time so that our knowledge of the goals is frequently out of date then we introduce further uncertainty about the required actions.

The third distinct cause of change complexity is what I have labelled as 'social complexity'. Here the desired system properties may be clear to all actors in the system (i.e. no 'goal complexity') but their importance or views on how to achieve them differs across the actors. Therefore, any change directed at achieving one system property creates a counter response from those who favour a different property or course of action. This adaptive behaviour means that it is impossible to define a sequence of actions to reach a goal since each action calls forth a response.

These three causes of complexity can co-exist or occur independently. As they are framed here as relating to 'change complexity' they are not viewed as being intrinsic to a system. Complexity is instead understood in the context of a change process that seeks to alter a system property. This helps to highlight one of the anomalies of the change literature where systems are sometimes viewed in absolute terms as complex or not complex without reference to any specific system property or output. For example, if we talk about an 'urgent care' system we can only label it as 'complex' if we identify some property of that system that is unpredictable (e.g. patient treatment times). Given the definitions described above it is then also possible that if we choose different properties then some of these may be predictable (i.e. non-complex) or have differing causes of complexity (i.e. component, goal or social).

3. A language of change in complex systems

In order to further develop my view of change processes I need to introduce and define the concepts of 'pattern recognition', 'system components', 'constraints' and 'expertise'. These then form a language that can be used to understand and unify the change practices described in complex, complicated and simple systems (as used for example by Snowden and Boone, 2007).

Authors such as Zimmerman, Lindburg and Plsek (1998) describe how the properties of a complex system cannot be predicted from moment to moment but can be described as patterns. For example, we cannot predict the weather in detail, but we can suggest some limits within which temperatures and wind speeds will routinely fall. Patterns are the result of the multiple interactions that occur in a system and as a result of the changing external environment.

I suggest that patterns of system properties can be thought of as occurring due to one or more 'constraints' on the behaviour of 'system components'. Without constraints no patterns can exist and we see random behaviour. This unpatterned randomness is what Snowden and Boone (2007) would refer to as a chaotic system.

'System components' are those objects that contribute to a system property of interest to us. In an organisation the components might be people, departments or machines. Components have some form of transformative function, typically receiving inputs that are converted into outputs. Components interact with each other, often with the output of one becoming the input of another. These inputs and outputs can be raw materials, products, people (in the case of services) or information. A component may also itself be made up of sub-components. So, a department is a component part of an organisation and the department will be comprised of components.

'Constraints' are anything that limits or shapes the actions possible by a component thus reducing its range of possible outputs. Constraints can be physical or non-physical. They include the effect of one component on another as the outputs of one component become the inputs of another. Constraints are not necessarily known to us and they may or may not be open to alteration.

So, as an example, a lathe machine in a factory can be considered as a component. It performs actions on a piece of wood. Those actions are 'constrained' by the raw materials provided as an input (e.g. the wood), the settings of the machine, the knowledge of the

operator and the work orders or plans governing what the operator should produce. Other constraints may well exist (e.g. the availability of power to run the lathe). If we are interested in the products produced by the factory containing the lathe (as a system property) then the lathe is one 'component' impacting on those products. If the output from the lathe goes to a team who decorate the wood then this team is another component relevant to the factory's output. Collectively the constraints on the lathe and other components act to create the 'pattern' of products.

In this simple example the identification of a 'component' is a matter of choice. The lathe and its operator could be considered as a single component or as two interacting components.

Using this terminology, change methods can be interpreted as ways of constraining the action of components. For example, when someone is given training, we are seeking to constrain the actions they take in the future. This new constraint potentially leads to changes in the system properties. Similarly, when we undertake actions such as aligning stakeholders with a shared purpose, we are encouraging them to voluntarily adopt constraints on their own behaviours. The terminology can also be applied to methods advocated in the complexity literature. For example, there are some who advocate the embedding of 'simple rules' (e.g. Zimmerman, Lindburg and Plsek, 1998). These are basic rules of behaviour applied across multiple system agents (i.e. components). These are believed to be sufficient to cause new patterns of system properties. Simple rules are therefore another example of constraints.

The language of constraints and components is not restricted to organisational settings. In the physical world of weather, an air molecule can be thought of as a component contributing to the properties of weather. Its behaviour is constrained by the laws of physics (e.g. thermodynamics). The net effect of this constraint acting on all elements of our atmosphere gives rise to weather patterns. In the example above the lathe has its own set of constraints and, if part of a production line, its outputs become constraints for other components. In human systems such as healthcare we are each constrained by our training, the protocols and rules we have to (or choose to) follow and the cultures we work within. We are also constrained by the inputs we receive (e.g. patient types, the availability and accuracy of diagnostic reports etc.).

Figure 119 shows a diagrammatic example of a healthcare system with some components and constraints suggested. It demonstrates how collections of components can themselves be considered as a component (e.g. equipment embedded within a service). It also shows how relationships can exist between components (i.e. the red line).

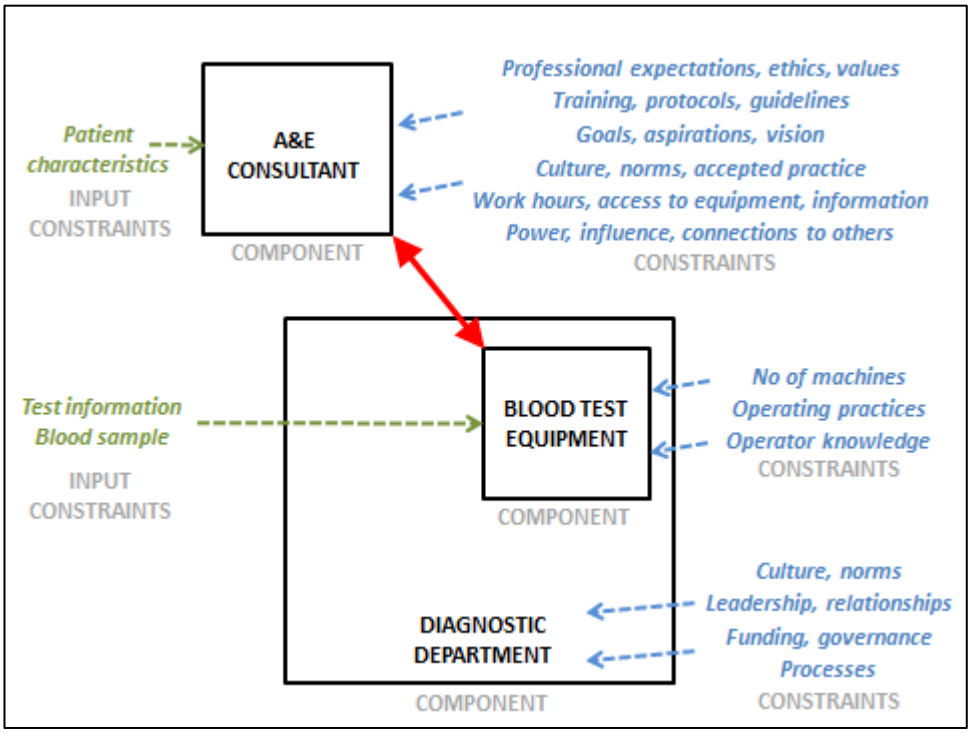

Figure 119: Illustration of system components and their constraints

In Snowden and Boone's (2007) Cynefin Model, 'expertise' is associated with those who have an ability to determine cause and effect in what they term 'complicated' (predictable) systems. I suggest that 'expertise' should instead be described in terms of the knowledge held about patterns of system properties and the typical configurations of constraints that generate these patterns. Those with expertise have a claim to some knowledge of this relationship. This does not imply that the knowledge is accurate for a particular system or even complete, but its existence is sufficient that hypotheses can be generated about which constraints to alter in order to achieve a desired new pattern of properties.

This choice of definition can encompass the description of expertise used by Snowden and Boone. In their complicated system, an 'expert' plumber sees the 'pattern' of a leak and knows which 'constraints' (like a failing o-ring) can be altered to change to a new pattern (where the leak is stopped). The plumber has expertise because they have seen similar situations or been trained in their trade. There is also a second order possibility where 'expertise' may involve having the appropriate contextual knowledge to construct

experiments that help to generate the constraint-based knowledge required to solve a particular problem.

Where I differ from Snowden and Boone is to suggest that 'expertise' is a concept that has application outside of complicated systems, no longer restricting us to systems deemed to have clear cause and effect linkages. Later I will also argue that the meaning of 'clear cause and effect linkages' is itself ambiguous and can be better understood using the language introduced here.

As an example of applying the concept of expertise beyond 'complicated' systems it is helpful to consider as an example an urgent care system, typically centred upon an accident and emergency (A&E) service. Many would consider such a system as having component complexity. As shown earlier in Figure 119, it is possible to use the language of patterns, components and constraints to describe this system. For example, patients enter this system, are treated and leave the system. A property of the system is their time to be treated, discharged or admitted (currently the subject of a four-hour target in the NHS). The exact time a patient will spend in the system is not predictable in detail, but patterns are observed, often varying according to time of day or day of week. These patterns are the product of all of the constraints in the urgent care system acting on its various components. For example, the numbers of doctors, access to diagnostic equipment, the culture within the A&E department and referral protocols to social care.

One consequence of this language is to recognise that it can be difficult to identify the boundary of a system as the boundary would be defined according to the components or constraints that impact upon a particular property. In the example above the pattern of treatment times is not just influenced by the A&E department but is impacted upon by other parts of the hospital and beyond. In addition, the constraints on these components may also be imposed from well outside the geographical boundaries we would associate with the system (e.g. the government imposed four-hour target as one example). The urgent care system, when considered from a treatment time perspective, could therefore arguably be said to include the government policy making processes that influence the constraining target. In the literature on systems it appears that system boundaries are not always clearly defined with somewhat arbitrary distinctions between what is considered a system and its surrounding environment. These distinctions typically rely on discussions of purpose whereas it may be more helpful to consider a system, as is done here, according to the components or constraints relevant to a measured property.

This urgent care scenario also helps in considering the role of expertise. In this system we might be interested in changing one of its properties. For example, if an A&E service is not achieving its four-hour target, a new pattern of times may be achieved by altering the system constraints. According to my definition, the choice of constraints to alter depends on the existence of 'expertise'. An expert has knowledge about which constraints are likely to be key to system behaviour and can suggest different configurations that might lead to different patterns (e.g. suggesting more doctors, diagnostic equipment or alterations to the department's culture). Expert knowledge may be tacit or codified as 'good practice' recommendations and it might be the result of experience with similar systems or result from experiences in the actual system being changed. In all cases expertise is represented by knowledge of a hypothesised association between configurations of constraints and patterns. Importantly, this expertise is not of a different type to that which we associated with the plumber earlier. The only qualitative difference is the degree of certainty over how constraints and patterns are linked.

Where expertise exists, we have hypotheses about actions we can take on constraints to alter the pattern of properties in some meaningful way. The more confident we are in the likely success of these hypotheses the more our actions will resemble planned change. If we have no expertise, then we have no justifiable hypotheses. If we cannot acquire expertise externally (e.g. by looking a good practice) our only recourse is to experimentation (i.e. pick some constraints to change and observe the impact upon the pattern of properties). Without some level of 'expertise' the constraints we change would be a random selection (i.e. do anything and see what happens). We could also exist in the middle ground where we have some expertise, but it is limited or in some way incomplete. We would then have hypotheses about actions we could take but would be aware of their limitations. I term this uncertainty as the degree of 'confidence' we have that our altered constraints will create a desired pattern. Here where confidence is high we would see actions akin to planned change (i.e. high confidence in cause and effect relationships). Where it is low we would again need to revert to experimentation but now with informed hypotheses. The degree of 'confidence' can be more formally defined as 'the degree of belief in a particular system setting that a specific change to the system configuration will lead to the desired pattern of properties'. Through this definition it can be seen that confidence is situational, relates to a specific change activity and is goal oriented towards a desired pattern.

This continuum of expertise (and confidence) is illustrated in Figure 120 where the blue area indicates the zone where considered action is possible. Those with expertise have some basis, even where confidence is low, on which to identify actions. By definition a novice has no expertise and thus it is meaningless to talk about the level of confidence in that expertise. The blue area indicates a continuum between these positions.

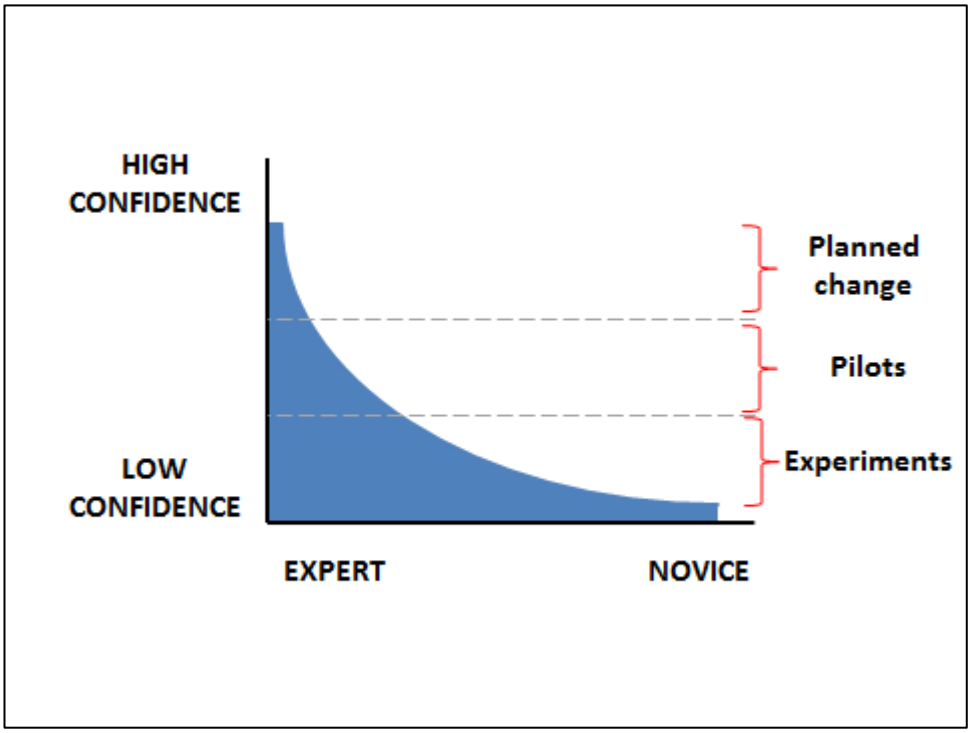

Figure 120: The expertise continuum (with action options available in the blue area)

Figure 120 can also be interpreted using the realist language described in Appendix B. Expertise amounts to knowledge of the relationship between mechanisms, contexts and outcomes. Confidence is determined by knowledge of the specific local situation (context) and goals in relation to this expertise. Therefore an 'expert' may know in general what works but have incomplete local contextual knowledge to be confident it will work in a given setting. Similarly, confidence is reduced if there is an incomplete perspective on whether the patterns of properties achievable reflect those desired within the system.

In Figure 120 it is possible to have high knowledge of the local context whilst still being a novice since the contextual knowledge may not be accompanied by the knowledge of mechanisms. In the absence of expert knowledge this contextual knowledge merely represents unactionable data about the system.

Some authors suggest that in complex systems change should occur via 'safe fail' experiments (Snowden and Boone, 2007; Zimmerman, Lindburg and Plsek, 1998). These are

small scale experiments where positive results are built upon and negative results dampened. In the context of Figure 120 a safe-fail experiment can be thought of as a learning activity to build knowledge to move from novice towards expert. For example, where it is based upon a low confidence hypothesis it is used to confirm linkages between configurations of constraints and patterns of properties. It can also be viewed as an action on the system that simultaneously creates and reveals linkages that did not previously exist.

Safe-fail and PDSA cycles are both types of small scale experiment. However, they differ in how their change hypothesis is used. I suggest that PDSA cycles can be thought of as 'deductive experiments'. They are based upon a cause and effect belief and are seeking to verify this belief through actions. In contrast, safe-fail experiments are primarily 'inductive experiments'. Although they have a rationale (a weak hypothesis) their primary goal is to create new knowledge about the system. They either reveal latent cause and effect relationships or alter the system enough to begin creating such relationships. Once revealed these relationships then become the basis for the deductive PDSA type embedding of change. These two types of experiment are located in Figure 120 as shown in Figure 121.

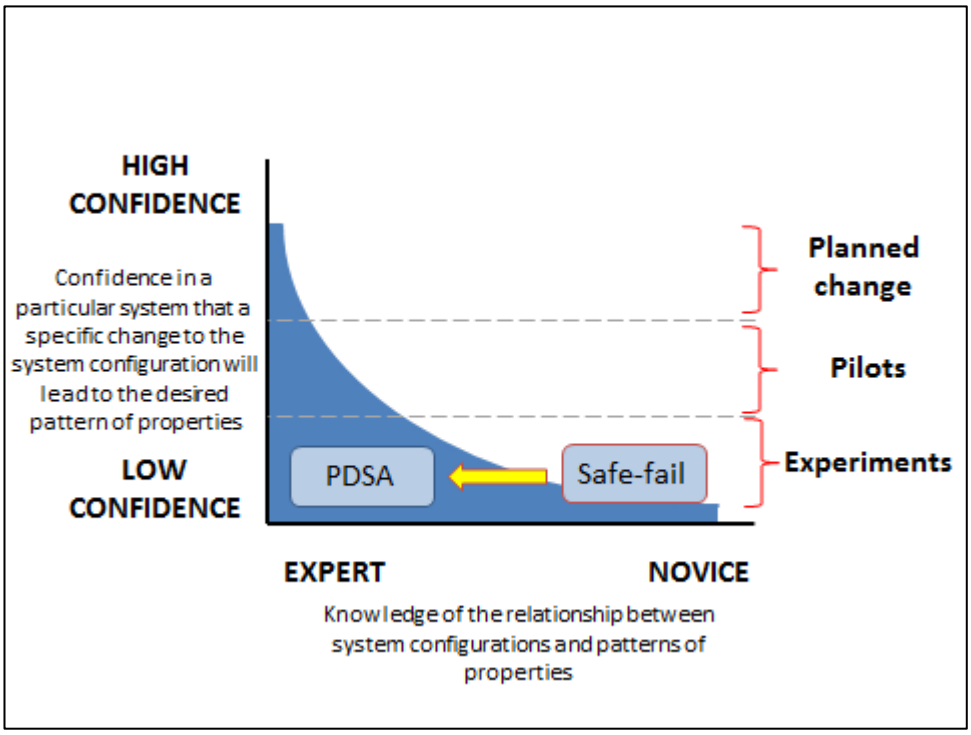

Figure 121: The expertise continuum with forms of experimentation

In undertaking change, expertise does not necessarily have to exist at the whole system level. Taking the example of Figure 119, an A&E consultant may know that to reduce patient treatment times (i.e. a property of the whole system) he or she needs faster access to blood

test results. Expertise in the diagnostic department may know which changes in constraints are likely to achieve this.

This distributed nature of expertise is one reason why major change efforts seek to engage those within the system in determining the actions necessary to change it. Another reason is that the process of shaping the actions can lead to people becoming committed to the changes. This commitment is itself a desirable form of constraint.

Returning to one of the challenges noted earlier in Section 4.1, historically it has been difficult to reconcile the complex and 'mechanical' views of systems. However as illustrated above, the concepts of patterns, expertise and constraints provide a language that bridges the complex and mechanical paradigms. As a further example, Figure 122 contrasts an A&E system (with component complexity) with a car production line (representing a mechanical system), showing two patterns of properties for the processes in each. For the car production line, despite its mechanical nature, it is still appropriate to talk about 'patterns of properties' (e.g. the pattern of how long it takes to produce a car). Like the A&E example we cannot predict in perfect detail what these properties will be for each car, but we can describe a pattern. This view of inherent, or 'common cause', variation (as a pattern) is a core part of the science of improvement (Langley et al., 2009).

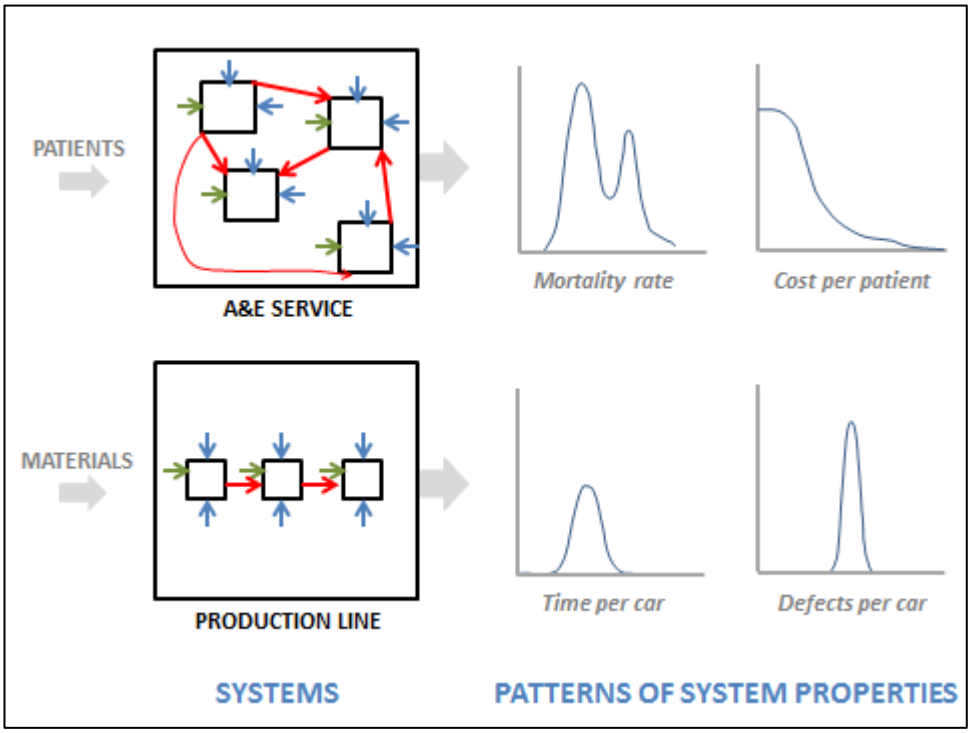

Figure 122: Two representation of patterns of system properties

Using the language of patterns and constraints the two examples in Figure 122 do not represent competing paradigms. The patterns of A&E properties and production line properties both depend on the constraints that are present.

I also suggest that 'expertise' functions in the same way in the two examples. In both cases expertise is about knowledge of potential associations between patterns of properties and configurations of constraints. The paradigmatic distinction is that in the mechanical view it is viewed as theoretically possible (if typically impractical) to have 'perfect' expertise so that knowledge of all constraints allows accurate prediction of specific instances. A complexity view (or component complexity view) suggests that perfection is impossible.

So, at a conceptual level the two examples in Figure 122 are not different. In the real world the only practical difference that separates the two is the likelihood that sufficient expertise exists to provide a high confidence that a change in constraints will lead to a desired pattern of properties. How we approach either change therefore still follows Figure 120.

Expertise is also context dependent. Placing an engineer in A&E to reduce waiting times produces a novice response as would asking a nurse to improve a car production line. But reverse these roles and we potentially introduce expertise. Component complexity, if associated with the degree of predictability, is therefore 'in the eye of the beholder' rather than an absolute property of a particular system.

The contrasting examples in Figure 122 also allow us to consider the impact of 'goal complexity'. Figure 123 shows the two properties already described for each system but now positions them as potentially contradictory. For example, in taking action in A&E to alter the mortality pattern (to reduce deaths) we may also alter the pattern of costs (in ways that increase them).

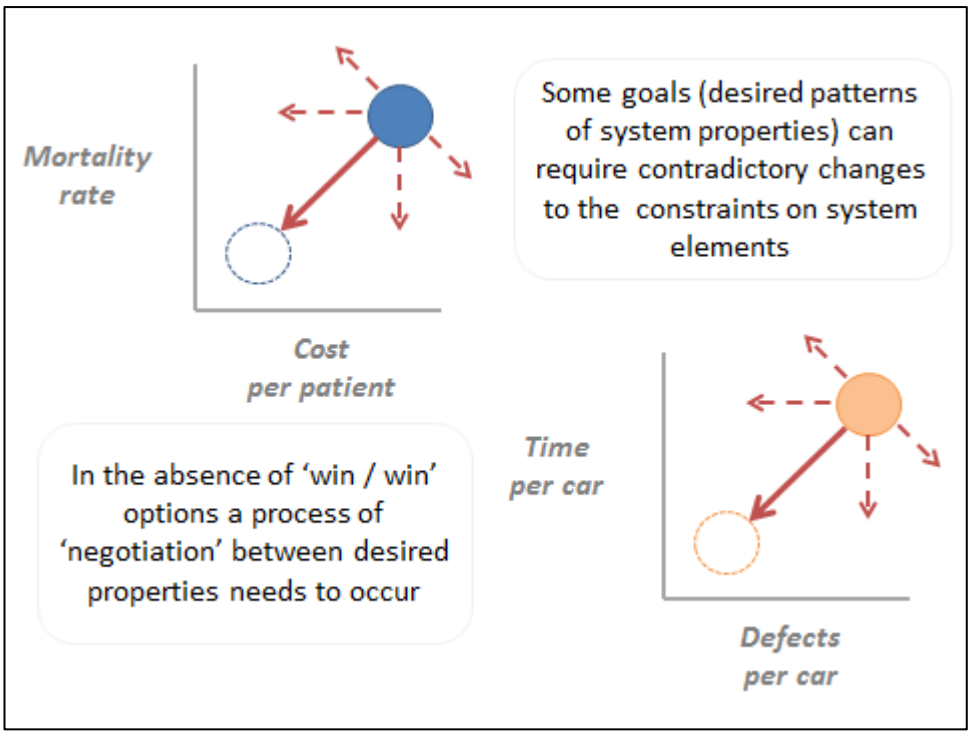

Figure 123: Illustration of contradictory goals and trajectories

With goal complexity there is still the potential that expertise might help if a 'win / win' configuration of constraints can be identified that is likely to provide desirable patterns for both properties. If no such configuration is known, then we still have the option of experimentation in the hope a mutual win can be found. But if we have inadequate expertise and no desire to experiment then our only option is to negotiate between the competing desires (goals), trading off gains in one with losses in the other. This need to exercise choice also occurs where the desired goals (system property patterns) are ambiguous. We cannot use expert based change or novice-based experimentation if we have not made choices about the system property patterns we desire.

We can therefore state that goal complexity is, in some situations, likely to require choice-based actions in addition to the use of expertise.

This brings us to the final cause of complexity namely 'social complexity'. As noted earlier this is distinct from goal complexity as it relates to how actors in a system value different patterns of properties and act to achieve these. For example, in A&E the nurses may want doctors to adhere to stricter treatment protocols to reduce patient harm. The doctors may not see the harm pattern as problematic and do not like the restrictive nature of protocols (and what it means for their 'patterns' of practice). They instead see faster discharges as the goal of the change process. Expertise may exist in both groups with each reacting to the

actions of the other to achieve their desired patterns of properties and configurations of constraints.

In scenarios such as this it is clear that the success of a change process is dependent upon your point of view. From the perspective of each party there are three routes to success.

- Identify a configuration of constraints and associated patterns of properties that are acceptable to all (i.e. the 'win / win' option).
- Convince the other party that they should adopt your desired patterns and constraints or negotiate a compromise (i.e. the 'shared purpose' option).
- Out manoeuvre the opposition by reconfiguring constraints in a way that achieves your desired pattern of properties and prevents the opposition from responding (i.e. the 'critical' option).

In effect this third approach involves two changes, the first to achieve the desired pattern of properties for one party and the second to create the separate pattern of properties that achieves control over the actions of the other party.

These options are seen in change practices suggested in the literature. Processes of vision creation are designed (in programmes like TCSL) to negotiate mutually agreed patterns of properties (i.e. shared goals or shared purpose) and configurations of constraints (e.g. ways of working). In Grint's work (2008) he defines a 'critical problem' as one where a leader assumes control and mandates a solution. This is an example of the third 'critical' option outlined above. By assuming control and exerting power the leader configures constraints to achieve their goal whilst simultaneously preventing countermoves.

The different causes of change complexity and the resulting practices they imply can be used to identify nine broad change scenarios when each of the causes is present in isolation.

These scenarios are as follows.

A. Goal complexity: Where goals appear contradictory and therefore seem to require contradictory configurations of components then expertise may allow an acceptable win / win configuration to be identified in some circumstances (i.e. sufficient movement towards both goals without invoking problematic contradictions). For example, reducing costs whilst increasing customer satisfaction can be achieved to a degree by removing errors that create rework.

B. Goal complexity: Where goals are contradictory and therefore require contradictory configurations of components then expert involved compromise may be necessary to agree an acceptable configuration (to avoid creating social complexity). For example, reducing costs whilst increasing customer satisfaction might be mutually exclusive goals once errors are removed.

C. Goal complexity: Where goals are ambiguous, this ambiguity needs to be resolved before meaningful action can occur (although some action may help stakeholders to clarify their goals). For example, the ambiguously goal of 'improving quality'.

D. Social complexity: Where different stakeholder advocate (and act towards) different goals and configurations then expert involved compromise through negotiation may be necessary to agree a configuration. For example, if HR and unions disagree on the roles of managers in an organisation.

E. Social complexity: Where different stakeholder advocate (and act towards) different goals and configurations then progress can be made by agreeing joint shared goals (properties). This is often achieved through visioning or joint goal setting processes. For example, encouraging a focus on the needs of patients if professions disagree on service configurations.

F. Social complexity: Where different stakeholder advocate (and act towards) different goals and configurations then expert (and power) based command can act to create dominance and prevent action by other stakeholders. For example, where services have not been able to agree a way to improve the commissioners might put a service out to tender to force change.

G. Component complexity: Where agreed desired system properties exist, there is expertise in defining the necessary system components (and intermediate states are acceptable where required) and confidence exists - then a planned change process is required. For example, redesigning a patient pathway to exactly replicate services delivered successfully elsewhere.

H. Component complexity: Where agreed desired system properties exist, there is expertise in defining the necessary system components, but expert confidence is low - then an experiment based approach to change is required. For example, when introducing obesity management practices in a deprived locality there might be a

good understanding of the types of interventions that are effective but uncertainty about how they should be introduced or adapted locally.

I. Component complexity: Where agreed desired system properties exist but there is no (or low) expertise to suggest a system configuration then an experimentation process is required (if expert knowledge cannot be gained from elsewhere). For example, a highly specialised and unique hospital-based service is asked to provide a community outreach service.

Experimentation does not feature in most of the scenarios where the focus is on goal clarity and goal alignment. However, if expert confidence is low then experimentation will be required and would be akin to the PDSA type experimentation seen in service improvement (as described by Langley et al., 2009). Also, in scenario C where goals are ambiguous some action (which would take the form of experimentation) can be used to help stakeholders to clarify their goals. In this scenario, action is used to evoke a reaction that helps to clarify the goal (e.g. a reaction to an action intended to meet the ambiguous goal of 'improved quality').

In all of these scenarios only the properties of the final state are considered. It is also possible that while the final state may have no goal complexity any intermediate states required to reach this goal may be contentious. So, stakeholders may agree a vision or end state but dislike or disagree with the steps necessary to reach it. Social complexity (and intermediate goal complexity) may therefore exist even when an endpoint is agreed.

In addition to the nine scenarios an additional scenario involving goal complexity could exist where system goals are changing over time beyond any central capacity to be aware of the goals and respond to them. This is a type of on-going goal ambiguity (scenario C) where goals cannot be clarified as a one-off event or meaningfully clarified periodically to allow iterative action planning. This might occur where an organisation is trying to respond to a very fast-moving external environment.

Authors such as McCrystal et al. (2015) would suggest that in this scenario we consider the distributed nature of knowledge and expertise in our system. So, while it may be impossible for a central change group to be aware of and respond to the shifting goals, it may be possible that others within the system have localised knowledge of how the goals are changing and a localised ability to respond. In the military examples offered by McCrystal and colleagues this localised knowledge resided in their front-line troops who understood how terrorist tactics were adapting in the field. The solution in this example was to devolve the power to respond

to those with the knowledge of the goals and the expertise to create localised solutions (i.e. the front-line units). The role of the central commanders was to both empower those front-line troops and create connections across different units that allowed the whole military system to learn and adapt.

In generalisable terms this tenth scenario adds two new elements to the concepts presented here. Firstly, it introduces the distributed nature of goal knowledge and expertise into our understanding of all the scenarios presented. Secondly it suggests that in some situations our goals may go beyond achievement of a desired system configuration to include the alteration of the system to enhance its adaptive capacity to respond to changing goals (i.e. changing our ability to change). This desired 'ambidexterity' of systems is reflected in the change literature (O'Reilly and Tushman, 2004).

So, in many real-world scenarios the 'goal' of enhancing adaptive capacity may be an explicit goal running alongside our desire to create specific system properties through change processes. This additional goal can therefore give rise to its own complexities. For many systems this is the dual challenge they face. They want to meet the goals of today but also create a system that is ready to respond to the goals of tomorrow.

4. Creating a visual way to describe complex systems and change process

In this section I want to return to what I mean by 'constraints' and how we might visualise their configuration in a system.

Lewin (1947) developed a force-field theory that describes how systems can exist in a dynamic equilibrium between opposing forces. Status quo or a static situation is achieved when forces are in balance and change is the result of imbalance. System thinkers such as Senge (1991) also draw attention to the role of feedback loops in contributing to this tension. These loops can create forces that grow in proportion to deviations from the status quo, providing a powerful push back to the equilibrium position. Culture can be thought of in this way. As our behaviours move away from the accepted status quo the culture acts to bring us back in line with the norms. Systems thinkers would suggest that organisations or other quasi stable systems have evolved to develop feedback loops that act to maintain what we observe as the status quo. Such an effect was described in the body of this report with reference to the powerful defensive routines encountered in organisations (Argyris, 1999).

A helpful metaphor used by Zimmerman (2014) that illustrates Senge's feedback loops is to view a system (or individual components in a system) as existing in a valley. The sides of the valley offer a 'gravitational' force that maintains the status quo behaviour at the base of the valley. Within this metaphor, different stable states of a system are described as a landscape of valleys. Where a system changes from one stable state to another, change activities bring into play a range of 'forces' that act to push behaviour out of one valley and into another.

Within this metaphor Zimmerman's valleys can be interpreted in two complimentary ways. The first is to view the valley sides as representing the pattern of a system property over time. So, as forces ebb and flow the system occasionally moves away from the status quo to return later, but spending the majority of its time in the centre of the valley. The second is to view the valley sides as representing the net effect of the constraints that hold the system in its status quo position. Most of the time the constraints are balanced with no net winner or loser and thus the system is at the valley floor. On rarer occasions some constraints are clearly dominating others, pushing back towards status quo.

These two complimentary perspectives are helpful. They represent system stability as an average effect, with systems constantly exploring new states but experiencing forces that push back towards the status quo. However, in the multiple valleys scenario one can see how random shifts in forces may at times lead to enough movement away from the status quo for the system to encounter a new stable state. Thus, system change (or new component configurations) can also occur in unplanned ways as constraints shift and change to randomly produce a new stable situation.

This valley metaphor has some similarities to the concept of 'fitness landscapes' (described in Zimmerman, Lindburg and Plsek, 1998). These landscapes appear in the complexity literature from biology as a way to describe how well an animal is adapted to its environment. In them the landscape dimensions are based upon varying environmental features and the height of the landscape is a measure of success (or fit) of the animal to the environment. For example, a polar bear would only be a success (i.e. on a peak) where the environmental dimensions provide cold temperatures and available food sources. As temperatures warm the 'fitness' peak gives way to become an unsurvivable valley. Unfortunately, this 'landscape' view reverses the role of valleys so that status quo is now a peak but the underlying concept is similar.

Using the valley metaphor it is possible to explore how major change occurs in systems. To qualify as 'major' (or transformational) we expect the system to look radically different to how it did before. This implies significant changes in the relationships between system components and potentially new relationships with additional components. In effect this would represent movement to a very different valley.

Figure 124 offers different scenarios for how major change might be undertaken in a planned way.

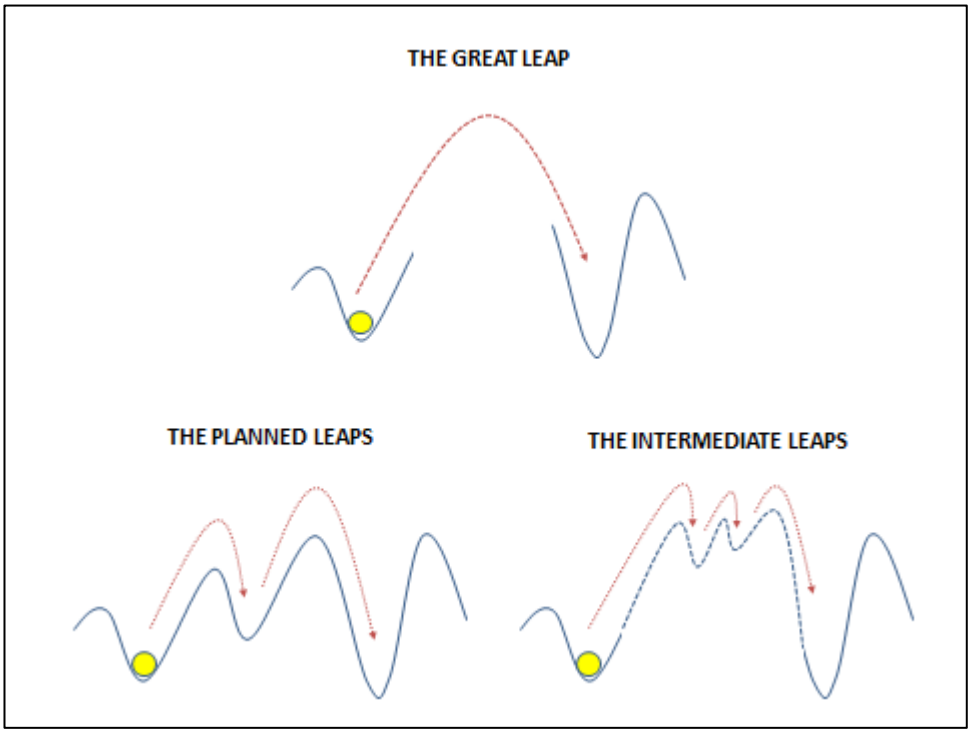

Figure 124: A valley depiction of system stability and scenarios for planned change.

In the 'great leap' major change occurs by attempting to define a whole new system configuration that offers the desirable pattern of properties. Change then occurs by rapidly changing everything at once, breaking all the old configuration relationships and reforming as new relationships. For example, to achieve a new pattern of healthcare outcomes it might be necessary to close an old hospital and build a new one with new working practices put in place. The 'great leap' occurs as the doors are shut on the old hospital and the new hospital and practices take over. The short timeframe of such a change means that the system avoids occupying any intermediate states. Use of the 'great leap' may therefore be necessary where no stable (or quasi-stable) intermediate states exist (e.g. if it is impossible to gradually build the new hospital and gradually swap over to new buildings and practices). The downside of

the ‘great leap’ is that it assumes that a new stable configuration can be predicted in advance of the leap.

In the ‘planned leaps’ type of major change a system is moved towards a new configuration in a series of stable stages (i.e. building the new world a piece at a time). An example would be the integration of two services that first occurs via co-location, then harmonisation of job roles and finally through common management structures. A similar scenario is represented by ‘intermediate leaps’ but now the intermediate states are only quasi-stable but exist long enough to allow movement to the next step. A physical example would be moving into temporary accommodation so that a building could be refurbished. In the short term the intermediate state is tolerable but in the longer term the forces in the system would prevent this from staying as the status quo. These two change approaches are gradual and may be appropriate where there is uncertainty about the detail of the desired final state since learning about potential system configurations can be generated during the staged process. For example, as the integrated services first co-locate, the learning from this new configuration can inform the process of harmonising job roles. Such staged processes therefore support working with the change complexity noted earlier.

A different visual representation that serves as an alternative to the valley depiction is to focus on the system elements and the strength of alignment between them. An example is shown in Figure 125. This molecule-like metaphor helps to illustrate the dynamic tension experienced in systems.

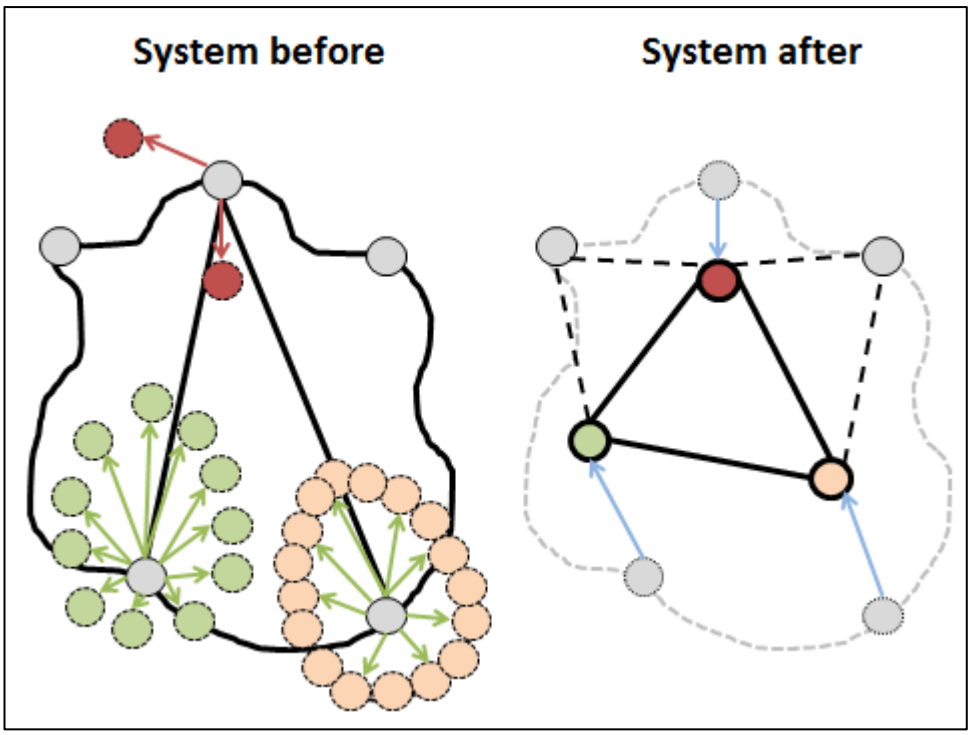

Figure 125: A system view based upon the relationship between system elements

In the example shown the 'system before' image has five system elements (grey circles) existing in a quasi-stable state represented by the black connecting lines between them. In this diagram we can imagine a constant vibration of the system elements as constraining forces shift over time (giving some elasticity to the connecting lines) but overall stability occurs because of the connections between the elements. These connections represent the alignment of components into a common 'valley'.

In the image two types of change process are shown. At the top of the 'system before' is an element that is amenable to planned change where the effects of action can be reasonably well known (shown as two options in red). At the bottom left of the 'system before' is a representation of a safe-fail experiment (as described by Snowden and Boone, 2007). Multiple, unknown outcomes of action are plausible (in green) but choices exist as to which are allowed to survive should they occur. Bottom right of the 'system before' image is an example of the unpredictable (but patterned) position of a third system element. For this element, multiple (unknown but limited) positions are possible (in pink) but are not controlled in the change process.

In the 'system after' image a new quasi-stable state is shown. It arises from the choices made in the planned change process and the safe-fail experiment. It also shows the impact on the

third (pink) component, now shifted to one of its possible positions in response to the change. New constraints (linkages) now exist which might create the new stable 'valley'.

This molecule-like metaphor is therefore an alternative and complimentary view to the valley metaphor that emphasises the alignment and stability of system components.

5. Critically evaluating and revising the Cynefin Model

The previous sections introduced my sense-making of change and complexity and compared this to elements of the literature. In this section I extend this comparison to consider two influential models.

- The Stacey Matrix (Stacey and Mowles, 2016)
- The Cynefin Model (Snowden and Boone, 2007)

The Stacey Matrix does not explicitly differentiate between the causes of complexity. It describes 'complexity' as a non-equilibrium state of a system characterised by a lack of agreement amongst stakeholders on what action is required and uncertainty about what the actions will achieve. Its action orientation suggests an implicit 'change complexity' orientation. The matrix is illustrated in Figure 126 (taken from The Leadership Centre, 2015).

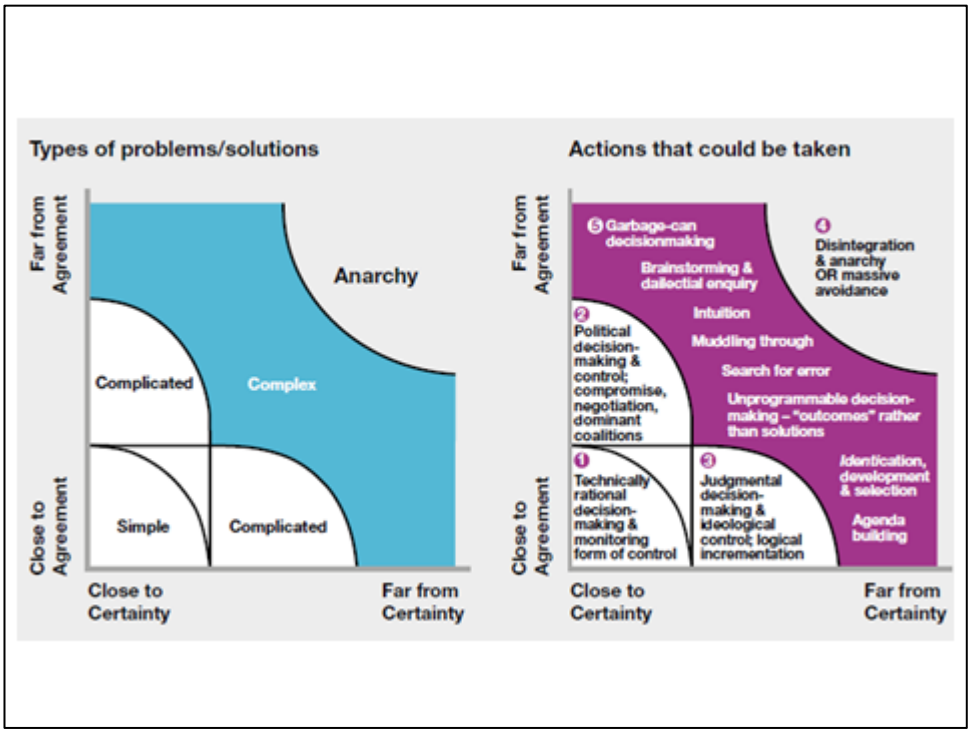

Figure 126: Versions of the Stacey Matrix

In the matrix it appears that different reasons for 'lack of agreement' are potentially conflated into the one axis. Most likely, the axis is intended to convey 'social complexity' (i.e. disagreement over the goals of a change) but 'goal complexity' would also present as disagreement. Similarly, the 'certainty' axis is ambiguous as it is unclear if certainty is a system property related to 'component complexity' (i.e. a highly mechanical system has low component complexity and is theoretically predictable). Or, occurs as a knowledge property (i.e. based on whether an 'expert' exists who understands the mechanical system).

The Cynefin Model describes four system types, three of which have been depicted in the Stacey Matrix in the left hand image in Figure 126 (i.e. simple, complicated and complex systems with the fourth system type of 'chaotic' labelled as 'anarchy' in the figure). In the Cynefin Model the simple and complicated system types are assumed to have known or knowable cause and effect relationships. It further suggests, as noted earlier, that complicated systems are reliant on expertise to identify cause and effect.

In offering its distinct system types the Cynefin Model makes no reference to the underlying causes of complexity. It suggests that systems can transition between the different system types but does not explain in detail why or how this transition occurs. In an extension to the model one of its authors (Snowden, 2013) has attempted to describe the way in which chaotic, complex and complicated systems are connected. This is illustrated in Figure 127 for a complex system showing how it connects to chaotic and complicated systems.

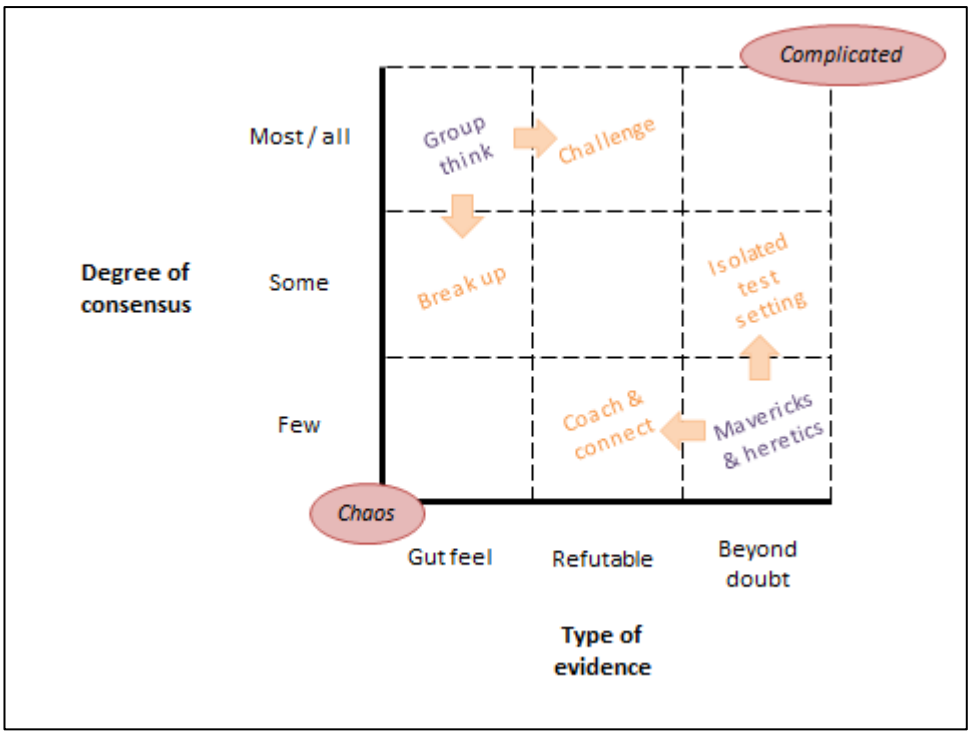

Figure 127: Snowden's description of the complex system type

In this figure Snowden has one axis representing the degree of consensus. This presumably mirrors the 'agreement' axis in the Stacey Matrix. The other axis shows the type of evidence and appears to again mirror the Stacey Matrix axis of 'certainty'. Figure 127 can therefore be equated to a flipped version of the Stacey Matrix with some slightly amended language and therefore has the same ambiguities associated with the Stacey Matrix.

The inner parts of Figure 127 show how Snowden suggests movement towards a complicated system can be achieved. Chaos occurs when each individual is acting on the basis of their own 'gut feel'. A complicated system occurs where everyone is acting on the same evidence. A weakness of this representation is that it is unclear why the later represents a 'complicated' system rather than a 'simple' system (i.e. adding no insight into what Snowden means by 'expertise').

In Figure 128 I have attempted to amend Snowden's depiction of the transition to better reflect my account of change complexity described earlier. In the figure the 'consensus' axis has been adjusted to become the degree of 'commitment to a shared vision or goals'. In doing this I have assumed that we are dealing with social complexity so commitment acts to remove this complexity. Social complexity has been selected as the cause of complexity in order to preserve the main structure of Snowden's domains rather than to suggest any special relevance of this cause as compared to the others introduced in Figure 118.

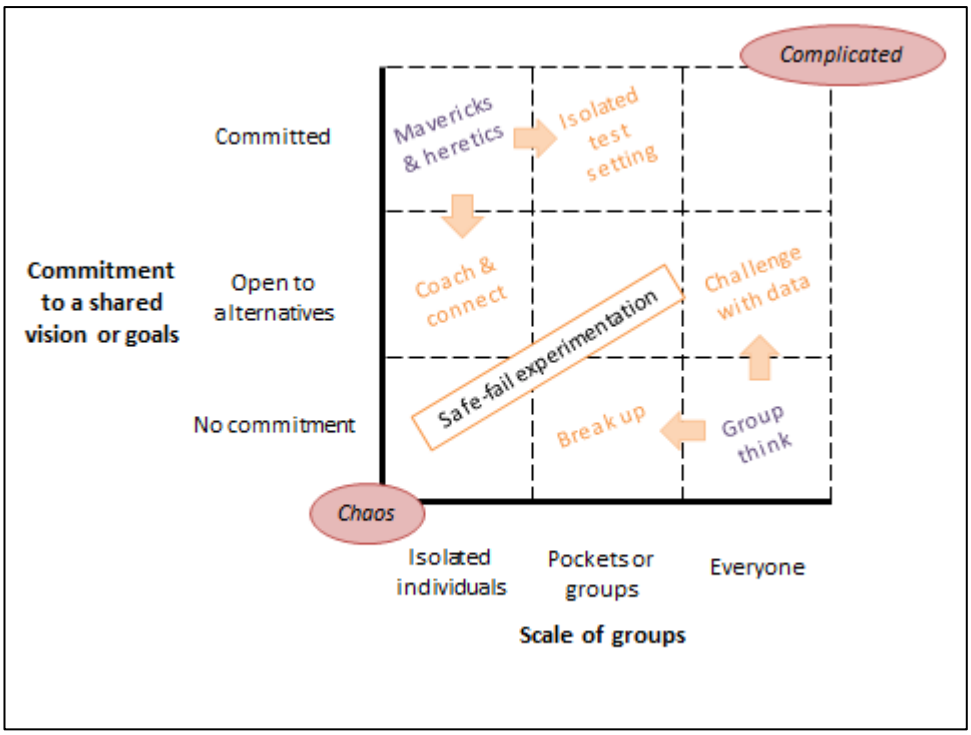

Figure 128: Adaptation of Snowden's complex system type

The other axis in Figure 128 shows how widespread this commitment is. Thus, in my reinterpretation of Snowden's work, social complexity disappears as everyone in the system aligns behind a shared vision or goals (i.e. a shared expectation about system properties). This means that in reaching the upper right corner of Figure 128 (i.e. a complicated system) we have everyone committed to a common goal or vision but do not imply anything about knowledge of the evidence. This provides scope to interpret the role of 'expertise' in the complicated system in relation to evidence and potential system configurations. Doing this provides a way to maintain the logical flow of Snowden's arguments that see chaos transition through complexity into the predictable complicated system that then utilises expertise. It also offers the potential to consider an image similar to Figure 128 representing a transition though a complicated system to become a simple system, presumably based upon the role of expertise.

A version of such an image is provided in Figure 129.

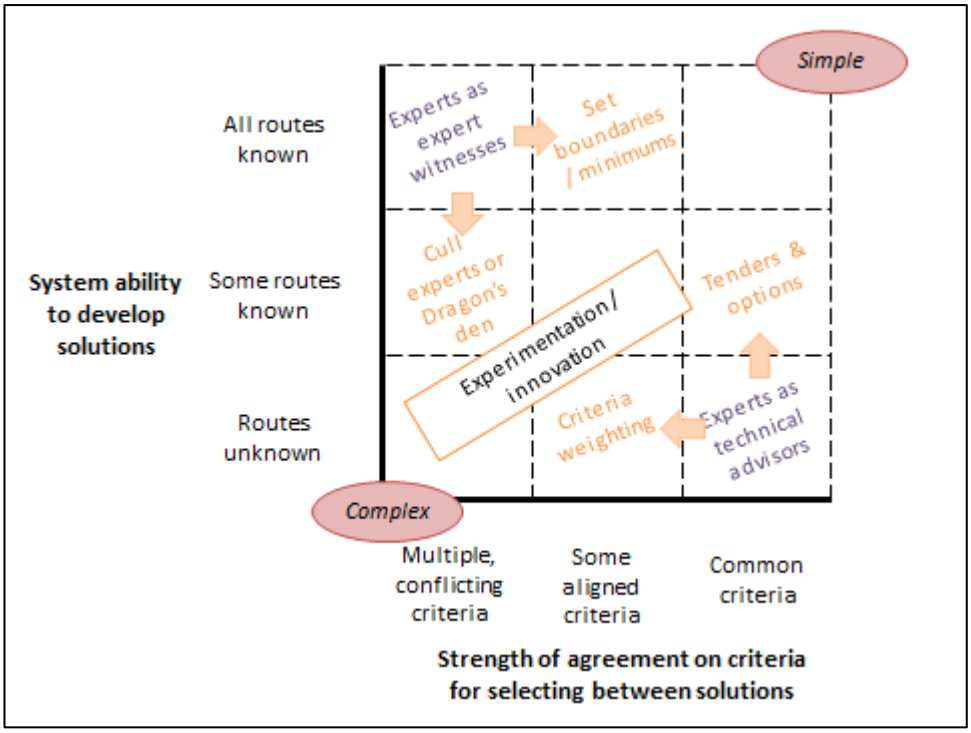

Figure 129: Adaptation of Snowden's complicated system type

In this figure it is suggested that one way to describe Snowden's complicated system is to contrast the ability of a system to develop solutions with the strength of agreement on the criteria for selecting solutions. 'Expertise' here has two functions as noted earlier in relation to Figure 121. The expert can provide guidance on solutions (i.e. patterns of constraints to produce desirable configurations and system properties). They can also help the system to agree how it will choose between different potential solutions. In the figure the role of expertise disappears once all routes are known and criteria for choosing between them are agreed. This then creates a 'simple' system.

Figure 129 is offered as a way to develop Snowden's helpful elaboration of the Cynefin model. Whilst it is likely that other axis definitions may also shed light on this view of complicated systems, the figure serves to illustrate how system knowledge and decision making practices might form part of the journey from the highly mechanical 'simple' view of change to the unpredictable yet patterned world of complex systems.

Appendix D Background on the interviews undertaken in this research

This appendix provides four tables describing the background to the different sets of interviews undertaken during this research.

Research interviews

Faculty member interviews (Section 8.1)

Purpose:

- To capture and share faculty views on TCSL programmes and the underpinning knowledge domains to provide a shared basis for future faculty actions.

Data set:

- Four faculty members were interviewed and themes were identified across the entire data set to create a collective case study (Stake 2000).

Research procedure:

- No sampling was used as all faculty members were interviewed.
- Interviewees were given the interview schedule in advance as a preparation aid.
- I undertook all of the interviews.

Analysis and interpretation:

- I thematically analysed all of the interviews using a mixture of deductive processes (based on some pre-defined codes reflecting the knowledge domains) and inductive processes (to reveal general views).

Validation processes:

- A summary of each interview was fed back to the interviewee for checking and agreement for the views to be included in the collective report.
- In the collective report the underpinning data was not shared in order to maintain confidentiality but the report was made available to all faculty members to check in advance of a faculty discussion.

Reporting:

- As noted above, personal interview summaries were provided to each interviewee.
- The collective report was structured to reflect all themes emerging from the interviews including contrasting perspectives where relevant. It included reflective questions, additional data and references to key literature.

Table 15: Faculty member interviews

Chief executive interviews (Section 8.2)

Purpose:

- To explore expert perspectives on transformational change to inform the knowledge domains and provide examples to be used in TCSL programmes.

Data set:

- Three chief executives were interviewed and themes were identified within individual interviews (creating instrumental case studies of practice, Stake 2000) and across the entire data set.

Research procedure:

- A purposive sample (intensity sampling) of respected chief executives was used with chain sampling from the first chief executive used to identify the other two.
- Interviewees were given the interview schedule in advance as a preparation aid.
- I undertook all interviews.

Analysis and interpretation:

- I undertook an inductive interpretative analysis.
- Cognitive maps (McDonald, Daniels and Harris, 2004) were created for each interview to show linkages between the main themes.

Validation processes:

- Analysis was not fed back to the chief executives due to their time constraints.

- In the reporting process, faculty were provided with extensive coded extracts of the interviews to validate identified themes.

Reporting:

- A thematic report on each case study was provided to the faculty together with a summary of themes represented across the interviews.
- A summarised version of the findings was included in a module.

Table 16: Chief executive interviews

Programme participant interviews (Chapter 11)

Purpose:

- To rapidly evaluate the TCSL programme design with participants to inform on-going design discussions.

Data set:

- Seven participants were interviewed with each interview acting as a separately themed data item.

Research procedure:

- A convenience sample was used based on participants willing to be interviewed.
- Interviewees were informed of the purpose of the interview in advance but were not provided with the interview schedule.
- I undertook all of the interviews.

Analysis and interpretation:

- I thematically analysed each interview inductively.

Validation processes:

- Analysis was not fed back to the participants due to time constraints (i.e. interviews and reporting occurred within two days of each other).

- In the reporting process, faculty were provided with extracts of the interviews to validate identified themes. Due to the short timeframes, it was also possible to recall interviewee comments in response to any faculty queries about the themes.

Reporting:

- A report of each interview was provided to the faculty.
- Interview finding were discussed by faculty in TCSL design meetings.

Table 17: Programme participant interviews

Case study system interviews (Section 8.3)

Purpose:

- To explore how the participants were undertaking transformational change over an extended period in order to inform the knowledge domains and to understand the impact of the TCSL programmes on practice.

Data set:

- Three interviews were undertaken with each of four pairs of participants representing four distinct projects (i.e. a total of 12 interviews with pairs).
- All interviews were used to create a collective case study (Stake, 2000) and interviews relating to each pair were used to create stories of practice.

Research procedure:

- Methods were based upon Yin (2009).
- A convenience sample was used based on system teams willing to be followed up over a period of one year. Interviews with pairs from each system were undertaken approximately 1, 6 and 12 months after programme completion.
- Interviewees were provided with generic interview schedules in advance of the first interview which were also used as the basis for the second interviews. For the third interviews each pair was provided with a schedule specific to them.
- Each interview had a lead interviewer and a faculty observer (able to ask questions at the end of the interview). I was the lead interviewer for all interviews except one where I took on an observer role.

- Analysis was undertaken by me and other faculty members, led by a faculty member with qualitative research experience.

Analysis and interpretation:

- First and second interviews were reviewed during the research process by faculty members to identify early themes and areas for follow-up.
- Following completion of all interviews a thematic analysis was undertaken based upon template analysis (King, 2004b) using TCSL content as an initial coding structure. Coding was shared between me and another faculty member.
- After initial coding, contextual 'micro-stories' (representing multiple short narratives drawn from each system) were created and used as part of an iterative process to create a thematic model.
- Analysis was led jointly by me and a faculty colleague. Other faculty members were involved in reviewing the micro-stories to create the final thematic model.

Validation processes:

- The customised interview schedule used in the third round of interviews was used as a validity check with participants on earlier content interpretations.
- During coding, cross-checking occurred between me and the other faculty member involved (which was also part of the process of refining the codes used).
- In the theme creation process, the other faculty members involved had access to the interview transcripts and the micro-story summaries.
- As part of the reporting process the remaining faculty members who were not involved in the thematic analysis had access to the micro-stories and illustrative data extracts. Most of these faculty members had been involved in the earlier interviews and therefore had direct knowledge of their content.

Reporting:

- The thematic model, micro-stories and illustrative data extracts were provided to all faculty members. Additional data extracts were circulated as examples of knowledge domain content.
- A summarised version of the thematic model was used in a module.

• A paper based on these interviews was submitted to the online journal BMJ Leader (Tweed, et al., 2018). The faculty member who jointly led on the data coding is the lead author and I am a co-author.

Table 18: Case study interviews

Appendix E Example of a micro-story

This appendix provides a copy of a micro-story from one case study site as described in Section 8.3.

The importance of having personal drivers when leading a change programme

Overarching narrative

Two change leaders were asked about why they became involved in a change programme. They spoke about their personal ambition and drive for change.

More detailed description

The first participant talked about the scale of change that was possible and its various dimensions.

"I think, for me, the thing that struck me was that this is an **opportunity to do things significantly differently**. I mean, transformational change, it truly is an opportunity to create **a different way of managing a very, very needy population** who consume a **significant amount of healthcare resources**, and to do it differently, and to do it in a way that is so much better for them" [A1 379]

The other also identified multiple dimensions.

"I could see a **huge opportunity to improve patient experience**, and to **manage the money better**. So Jeremy Hunt talks a lot, doesn't he, about saying that good and quality care costs less, and I think that this could be one of those genuine cases" [A1 387]

Their change motivations and previous experiences influenced decisions to become involved in the change programme.

"Certainly from my point of view, and **one of the biggest reasons I applied** for the post, was around the **integration of primary and secondary care** and social care. In a previous role I'd been working on community sequence and working across the patch with the community teams, and it really, really struck me at how well community teams work with integration, and actually how we don't particularly work very well in the acute setting with integration. **I think that was something that really, really struck me in a previous role, and it's a real passion of mine to make work**." [A1 399]

Conclusions

This story illustrates the type of *burning ambition* driving involvement in leading a change. It also identifies a range of personal motivations for involvement including the scale of change, the type of benefits that could be achieved and the role of previous experiences.

Links to existing theory and literature

- Links to *burning ambition*
- An example of multiple benefit framings (linked to *framing the change*)

Outcomes and learning

- Illustrates *burning ambition* (and potentially how this might be derived from previous experiences).

Personal reflections

- This story was highlighted since both participants described personal reasons for leading the change that went beyond role. It was also noted that these ambitions pre-existed before applying for the posts.

Appendix F Case studies CMO configurations

This appendix provides an analysis of CMO configurations identified from a review of the longitudinal case study micro-stories as described in Section 8.3.

CMO configurations from case studies

The tables below show CMO configurations extracted from the micro-stories for the four systems (labelled A-D) in the longitudinal case study enquiries. Each describes actions in the first column, mechanisms in the second and outcomes in the third. Mechanisms are inferred from the text or hypothesised. Below each table is a list of contextual factors identified across the micro-stories.

System A

Action	*Suggested mechanism*	*Outcome*
Creating a vision with others	Involvement producing ownership	Wider commitment to changes
Connecting actions to the vision	Raising awareness of the reality of the change programme	Increased tangibility of the transformation and further alignment of actions
Describing change as long term	Mental positioning of the change outliving individuals (i.e. legacy, passing the baton etc.)	Shaping decisions to depersonalise them
Demanding quick progress	Pressure to demonstrate movement	Inappropriate actions
Devolving responsibility for transformation to others	Distancing senior leaders from the change	Disconnected leaders
Role modelling	Demonstrating the value of certain behaviours	Emulation
Being open /admitting mistakes	Perceived honesty	Trust
Belief in the vision	Commitment beyond personal needs	Resilience
Working as a team	Mutual support	Resilience

Crisis	Urgency and adaptability	New options

Table 19: System A CMO configurations identified from micro-stories

Contextual factors identified:

- Siloed working
- Public Board meetings inhibiting discussion and decision making
- Changes in executives
- Pressures to demonstrate progress
- Coming under the special measures regime
- Financial pressures
- Personal resilience
- Lack of information
- Poor access to senior people
- Optimism

System B

Action	*Suggested mechanism*	*Outcome*
Bringing system executives together	Sharing viewpoints	Shared goals
Executive project leadership	Providing authority	Permissions to act
Using change tools	Structuring activities	Better outcomes
Acting as an honest broker	Connecting people	Aligned activities
Having a cross-system role	Being non-partisan	Trust / problem focus / ability to challenge
Using specific language for activities	Reinforcement of connections	Mindset shifts
Having role neutrality	Psychological safety	More honest conversations

Focusing on system goals	Conversation shaping, creating awareness of interdependencies	Less organisational focus
Having regular meetings	Relationship building	Trust and understanding
Role modelling system leadership	Confidence building	More system leadership
Admitting lack of knowledge	Demonstrating humility	Trust
Role modelling acting in uncertainty	Showing action is possible	More action
Chunking transformation activities	Making change manageable	Reduced anxiety / greater confidence
Providing a safe discussion space	Safety	Building trust, understanding, repositioning expectations
Using specific change tools	Expressing viewpoints	Wider understanding
Connecting changes to patient impact	Linking to shared values	Enabling difficult conversations
Understanding other's self-interest	Awareness	Knowledge of how to engage others
Building relationships	Trust and understanding	New accountabilities
Behaving consistently	Creating behaviour expectations	Trust

Table 20: System B CMO configurations identified from micro-stories

Contextual factors identified:

- Relationship maturity
- Perceptions about agendas
- History / baggage
- Role neutrality

- Levels of self-interest
- Personal resilience
- Comfort with uncertainty
- Degree of trust
- Psychological safety

System C

Action	*Suggested mechanism*	*Outcome*
Informal conversations	Removing formal interaction expectations	Creative thinking, foundations for later formal interactions
Exclusion of a stakeholder	Creating gaps in alignment	Project delays
Work stream reorganisation	Aligning change activities	Activity synergy
Supporting local groups interpret the vision	Local interpretation, consensus, peer pressure	Local changes
Framing change broadly	Encompassing multiple goals	Broader change commitment
Taking a patient focus	Using a shared value	Goal alignment
Role modelling	Emulation and signalling of intent	Changed actions
Reframing situations or problems	Different thinking	New solutions or activities
Interaction with operational staff	Awareness raising	New insight into system problems
Changing the direction of a transformation in response to major problems	Self-awareness of progress	New direction
Allowing staff to vent frustrations	Containment	Ability to move forward
Managing personal resilience	Humour, peer support, rationalisation, patient focus, depersonalising hostility / decisions	Resilience
Viewing others differently (more accepting of motives)	Lessening blame / anger	Better relationships

Table 21: System C CMO configurations identified from micro-stories

Contextual factors identified:

- History of relationships
- Expectations about project structures or processes
- Change complexity
- Savings requirements
- Changing roles of key players
- Attitudes to risk
- Access to chief executives
- Levels of delegated authority
- Chief executive support for change
- Role based constraints (e.g. financial people having to take the organisation perspective)
- Degree of comfort with current practice
- External decision making

System D

Action	*Suggested mechanism*	*Outcome*
Appointing a senior programme lead	Signalling importance	Importance of the programme intent highlighted
Communicating where action results from people's views	Demonstrating listening	Increased involvement (decreased disengagement)
Engaging in widespread listening and discussion exercises	Linking changes to multiple stakeholder goals, building trust, creating safety, tackling negative views	Acceptance of a vision
Using data in support of a change	Creating an evidence base	Agreement to a need for change
Using case studies of positive changes to the patient experience	Creating awareness of what is possible, building credibility	Building confidence in the proposed changes

Using a community of practice	Idea sharing, catharsis, creating awareness of potential problems	Idea and action generation
Translating programmes of change into what they mean for individuals	Personalising change	Building commitment
Using qualitative measures of patient experience	Linking changes to values	Gaining more acceptance of benefits
Independent evaluation of changes	Enhancing the validity of change claims	Acceptance of further changes

Table 22: System D CMO configurations identified from micro-stories

Contextual factors identified:

- Personal drivers of those leading the change
- Funding for the changes
- GP championing
- Peer support / aligned aspirations
- Requirements for quantitative evidence
- Access to data
- Requirements from national bodies
- Personal backgrounds
- Historical organisational relationships
- Degree of chief executive championing
- Major events (e.g. negative CQC inspections)

Appendix G Programme evaluation data and analysis

This appendix provides summaries of the evaluations undertaken for the seven TCSL programmes during this study. These are referred to throughout Chapters 9 to 11.

November 2016 cohort

In December 2016 a card voting process was undertaken with participants to gauge their views on the programme design and in particular its virtual elements. Participants had four coloured cards and were shown a series of questions, each with four response options. A short plenary discussion took place after each vote to briefly explore the findings.

Table 23 shows the questions, response options and a summary of the overall responses. The latter was based upon a visual estimation.

Question and response options	*Results*
Should we include the virtual element of the programme? • Yes, as it currently is • Yes, but more focused on discussions • Yes, but more focused on materials (e.g. videos, papers etc.) • No, just have the workshops	The majority of views were evenly split between including virtual elements focused on materials and just having workshops.
For those of you who have not accessed all the on-line materials - why? • Lack of time • Didn't think they'd be useful • Technical difficulties (e.g. firewall or computer access) • Just not my preferred learning style	Most participants responded 'lack of time'. In a plenary discussion participants stated that it was easier for them to set aside whole days for off-site workshops than to carve out time in the workplace to look at on-line materials.
For our current materials, how many workshop days would you prefer? • Keep it as it is	Responses were evenly divided between keeping the current workshop pattern

• Expand to 6 days (2 lots of 3-day workshops) • Expand to 6 days (3 lots of 2-day workshops) spread over 5 months • One day per month (over 5-6 months)	and expanding to six days delivered as 2-day workshops. In plenary discussion participants stated that 2-day workshops provided an appropriate balance between minimising travel and being able to take time away from their work duties.
Would you be interested in any of the following additional support offers? (multiple responses allowed) • 1-day overview of transformational change (delivered in your system) • 1-day skills based workshops (e.g. a day on public narrative) delivered nationally • 1-day system based facilitated workshops (e.g. vision creation) • Access to coaches	The majority of participants wanted each support offer. System based facilitation received near 100% support.

Table 23: Workshop based voting options (December 2016) summary responses

The workshops for this cohort were evaluated using end of day questionnaires. Table 24 shows the evaluation questions agreed with faculty.

Module specific	
Ratings	• How clear was the explanation of the content? • How relevant do you think the content is to your change programme? • How helpful was the exercise or plenary discussions in consolidating the learning for you? • Did the time allocated to the session feel adequate? (very good / good / poor / very poor)

Open comments	• What did you find particularly relevant? • How could the session be improved?
Overall programme	
Open comments	• General comments

Table 24: Structure of the November 2016 cohort workshop questionnaires

A four point 'forced-choice' Likert scale was used for the module rating areas (i.e. no middle option was given in order to force a choice between positive and negative views). For analysis purposes a scale of 5-1 was assumed (where '5' was allocated to 'very good' and the unavailable middle option was equated to '3').

Response rates for the five workshop days were variable. The first workshop achieved 89% and 60% response rates for its two days whereas the second achieved daily rates of 53%, 49% and 58%. According to Robson (2011, p.260) "there is little agreement on what constitutes an adequate response rate" going on to suggest that 60% is acceptable. As noted in Section 6.1, Sivo et al. (2006) state that the main concern with low response rates is the potential for nonresponse error (i.e. the systematic under representation of people sharing some common feature). This can lead to sample bias and act as a threat to external validity (i.e. the ability to generalise from the questionnaire views to understand the experience of the cohort as whole). The same authors also suggest that low response rates can lead to a loss of power (i.e. the ability to discern significant viewpoints diminishes). However, they note that low response rates are not uncommon citing various study reviews showing mean response rates in published papers of 50% or less.

Using targeted follow-up of non-respondents to increase response rates in this research was not feasible. Questionnaires were anonymised to encourage completion and the use of individual specific pseudo anonymisation (allowing identification of non-responders) was not logistically possible. However, efforts were made to encourage completion and avoid bias following the general guidance offered by Dillman (1999, cited in Sivo et al., 2006). For example, participants were routinely informed of the faculty desire for honest and open feedback to inform future programme design. This sought to avoid the perception that feedback only had a superficial importance or was intended to support other purposes such as programme marketing. It was also intended as an altruistic incentive to provide feedback. Participants were also encouraged to complete the questionnaires throughout the workshops rather than waiting until the end of each day. This was intended as an aid to recall

and avoid the loss of questionnaire data from those who left the workshops early (although there was likely to have been some attrition due to early departures). Similarly, questionnaires were distributed each day rather than use a single workshop or programme question.

In the analytical process the triangulation of questionnaire findings with faculty observations of the participants' responses to modules during workshops also limited the impact of any nonresponse bias. In later programmes further triangulation was also provided through short participant interviews (as described later).

Therefore, in this research it was assumed, despite some response rates below 60%, that questionnaire data provided a valid picture of the participant experiences of the programmes.

Quantitative data from questionnaires was also analysed statistical (as described in Section 6.1). For this cohort this analysis is shown in Figure 130 to Figure 133 and summarised in Table 25. This table shows modules that were rated statistically different from the mean ratings in each area.

Modules rated significantly higher than the mean rating	
Clarity	• Public narrative • Innovation tools (choice architecture) • Innovation tools (prototyping) • Innovation tools (six thinking hats)
Content	• Supporting dialogue and mapping polarities • Innovation tools (choice architecture)
Exercise	• Supporting dialogue and mapping polarities • Using creativity to drive transformation • Innovation tools (choice architecture) • Innovation tools (six thinking hats)
Time	• Innovation tools (choice architecture) • Innovation tools (stepping stone) • Innovation tools (prototyping)

	• Innovation tools (six thinking hats)
Modules rated significantly lower than the mean rating	
Clarity	• Understanding your system • Effective action planning • Using qualitative intelligence • Team discussion – how are tackling our change
Content	• Understanding your system • Effective action planning • Using qualitative intelligence • Team discussion – how are tackling our change
Exercise	• Exploring key concepts in transformational change • Understanding your system • Team discussion – how are tackling our change
Time	• Exploring key concepts in transformational change • Understanding your system

Table 25: Summary of statistically significant ratings (November 2016 cohort)

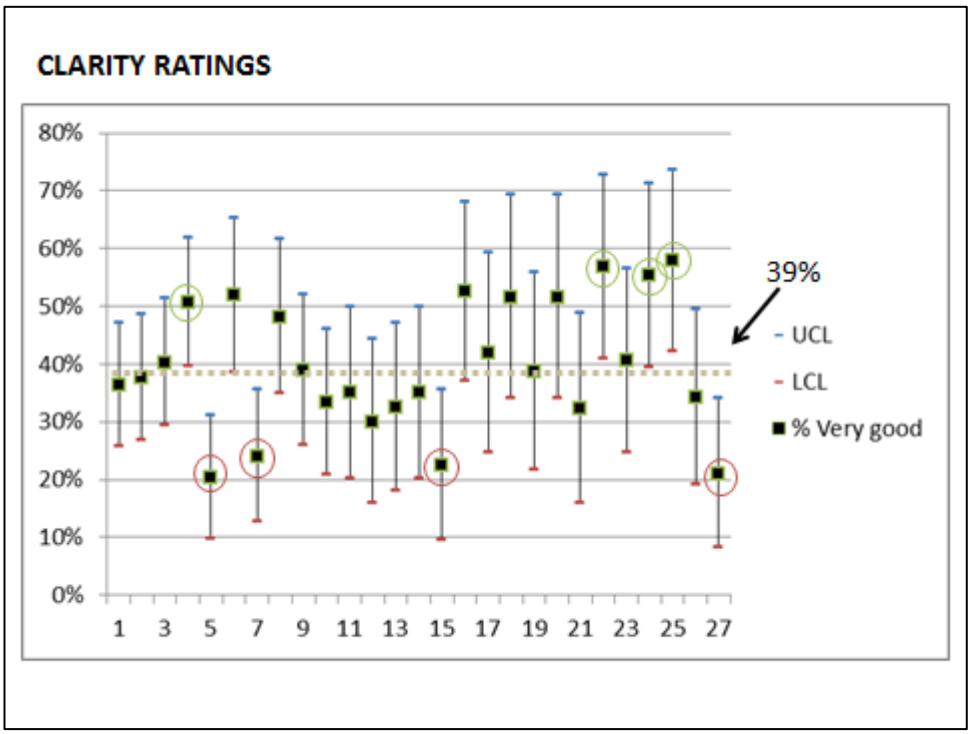

Figure 130: Clarity of explanation analysis (November 2016 cohort)

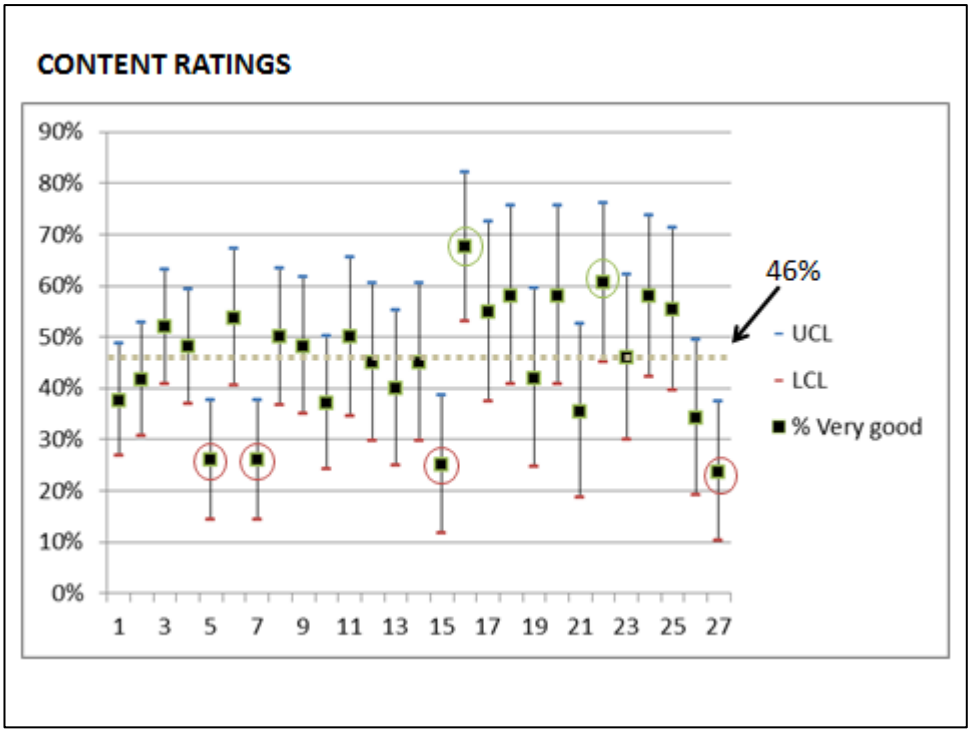

Figure 131: Content relevance analysis (November 2016 cohort)

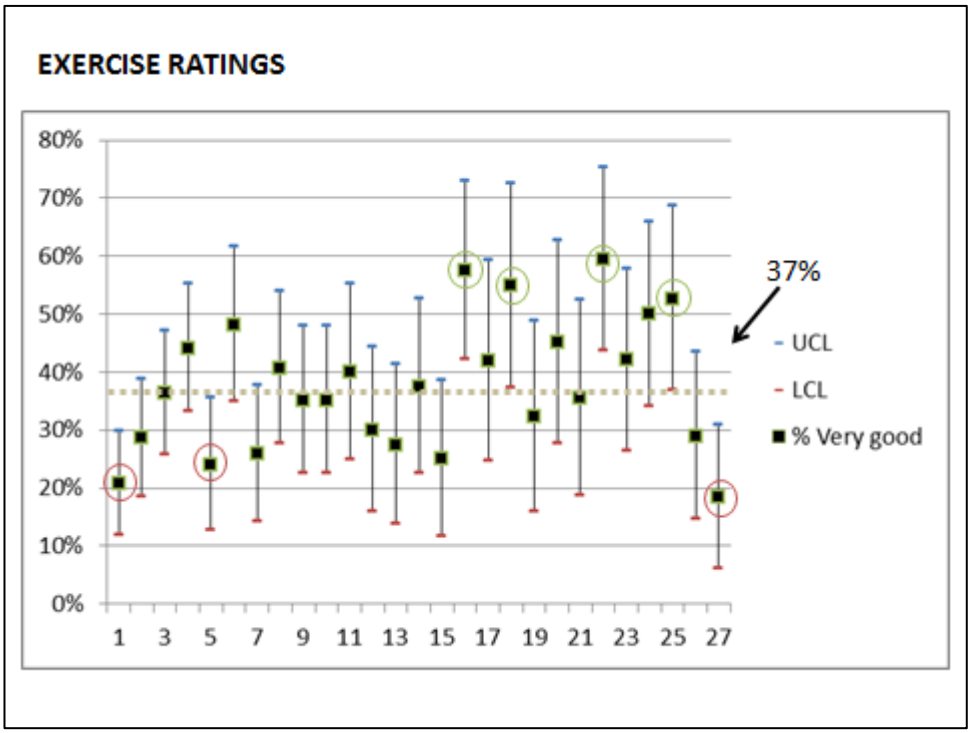

Figure 132: Helpfulness of the exercise analysis (November 2016 cohort)

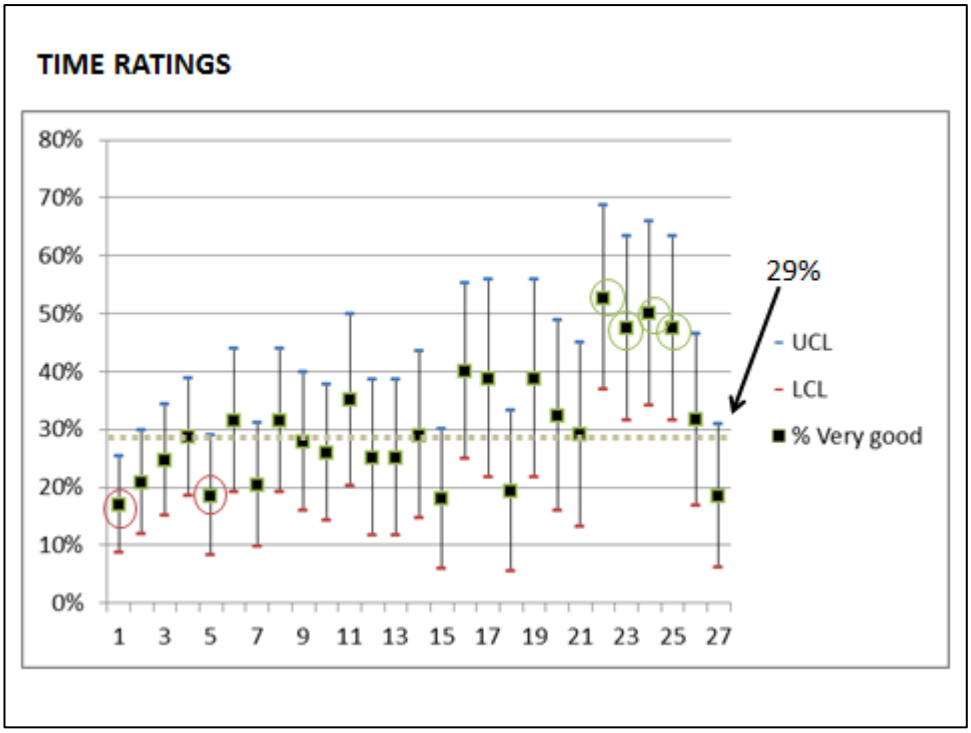

Figure 133: Time allocated analysis (November 2016 cohort)

Qualitative comments accompanying the questionnaires did not provide much additional insight into the individual module ratings. However, they did indicate that

- for some, the programme felt rushed with too many modules and insufficient time for discussions;
- participants valued the time available to get to know their team colleagues;
- some modules were felt to repeat materials already provided virtually (although views varied as to whether this was repetition or a helpful recap);
- most modules resonated with at least some participants;
- the current status of teams and projects sometimes influenced their view of modules (e.g. a module on 'Creating a vision' is less relevant if a team believes they already have a suitable vision); and
- participants responded positively to more novel delivery formats (e.g. the use of video).

Of these the most prevalent theme was comments on wanting more time for the team discussion elements in each module.

January 2017 cohort

As discussed in Chapter 9, this cohort had different characteristics to the target audience for TCSL programmes. Despite this, a questionnaire-based evaluation was undertaken as it was reasoned that it could still provide feedback on the modules and information about the effectiveness of a shorter two-day format.

The questionnaire was designed with other faculty members based on the structure shown in Table 26 (replicating much of the design used for the November 2016 cohort).

Module specific	
Ratings	• How clear was the explanation of the content? • How relevant do you think the content is to your change programme? • How helpful was the exercise or plenary discussions in consolidating the learning for you? • Did the time allocated to the session feel adequate? (very good / good / poor / very poor)
Open comments	• What did you find particularly relevant? • How could the session be improved?
Overall programme	
Open comments	• General comments

Table 26: Structure of the January 2017 cohort workshop questionnaires

Day specific questionnaires were administered, analysed and the results disseminated to faculty members as described in Section 6.1. Response rates for the two days were good at 91% and 85%.

A few participants chose to rate some items between 'good' and 'poor'. These were included in the analysis and taken as a 'fair' rating (and in keeping with the numerical ratings described earlier these were allocated a value of '3').

Table 27 summarises the analysis of the rating data.

Day 1 (31 responses, 91% response rate)				
Module	Clarity	Content	Exercise	Time
Exploring key concepts of transformational change	4.55	4.58	4.45	4.30
Building trust and understanding with others	4.55	4.61	4.52	4.45
Understanding your system	4.58	4.58	4.48	4.39
Creating a vision	4.55	4.55	4.35	4.26
Personal leadership of change	4.52	4.52	4.23	4.26
Day 2 (29 responses, 85% response rate)				
Module	Clarity	Content	Exercise	Time
Distributed leadership	4.79	4.79	4.55	4.34
Developing driver diagrams	4.86	4.83	4.76	4.74
Working with resistance	4.62	4.90	4.52	4.45
Using safe to fail experiments	4.62	4.58	4.55	4.55
Using creativity to drive innovation	4.58	4.55	4.48	4.48
Tools for innovation - fresh eyes	4.45	4.45	4.45	4.5
Tools for innovation - choice architecture	4.41	4.28	4.18	4.33
How are we tackling our change	4.61	4.54	4.36	4.44

Table 27: Quantitative workshop evaluation results for the January 2017 cohort

This shows high ratings for all modules with all means in the 'good' to 'very good' range.

Statistical analysis is summarised in Table 28 and shown in Figure 134 to Figure 137.

	Modules rated significantly higher than the mean rating
Clarity	• Distributed leadership

	• Developing driver diagrams
Content	• Personal leadership of change • Developing driver diagrams • Working with resistance
Exercise	• Developing driver diagrams
Time	• Developing driver diagrams

Table 28: Summary of statistically significant ratings (January 2017 cohort)

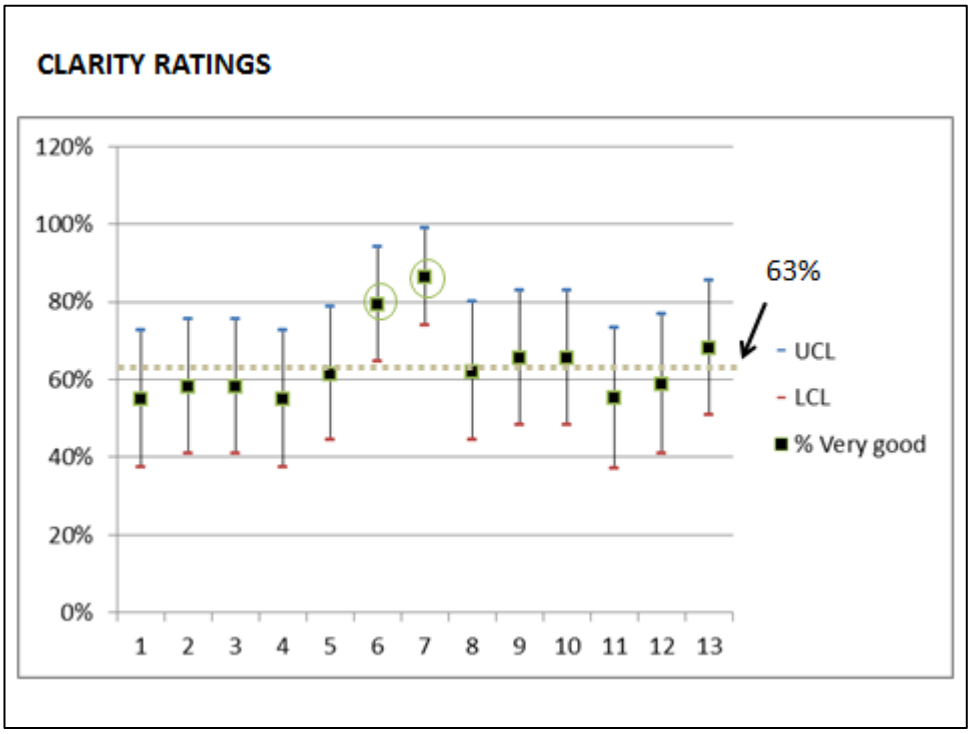

Figure 134: Clarity of explanation analysis (January 2017 cohort)

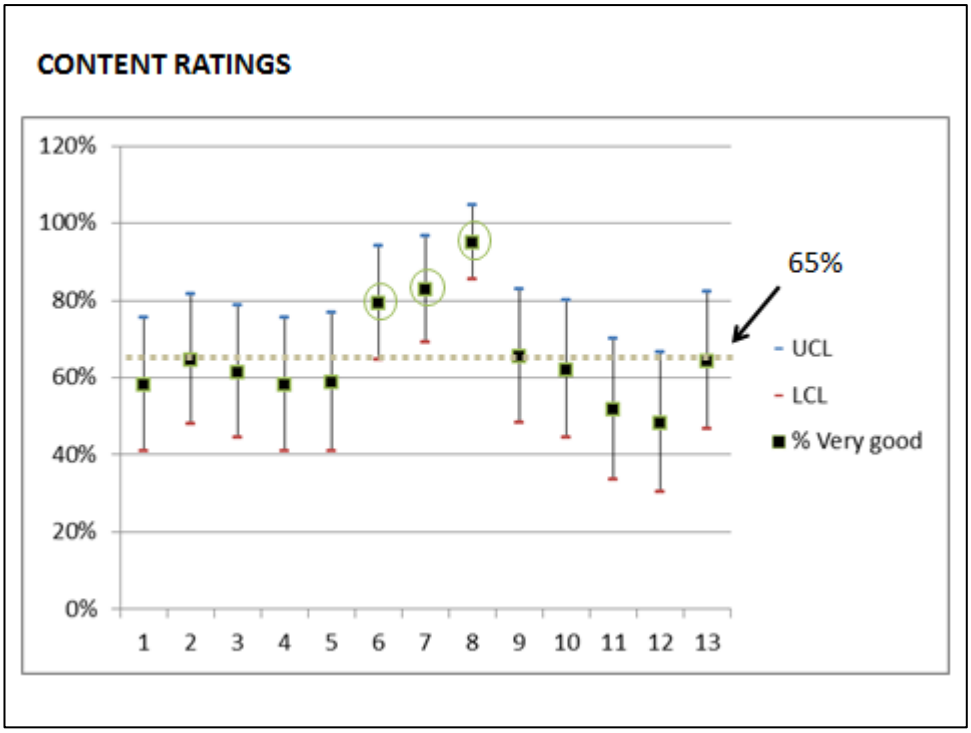

Figure 135: Relevance of content analysis (January 2017 cohort)

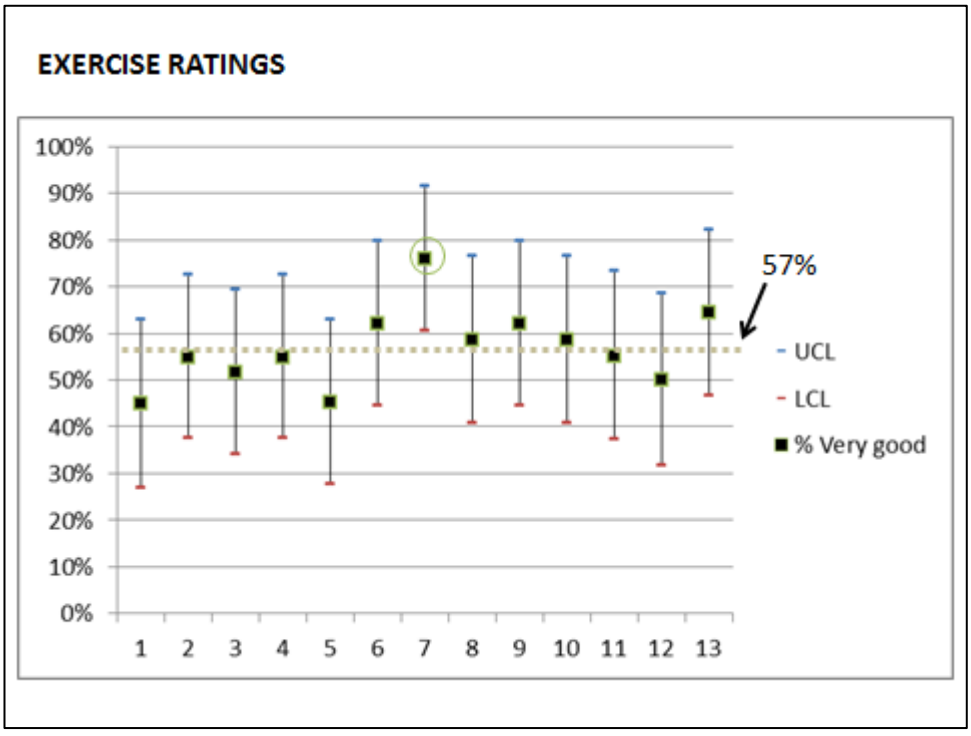

Figure 136: Helpfulness of the exercise analysis (January 2017 cohort)

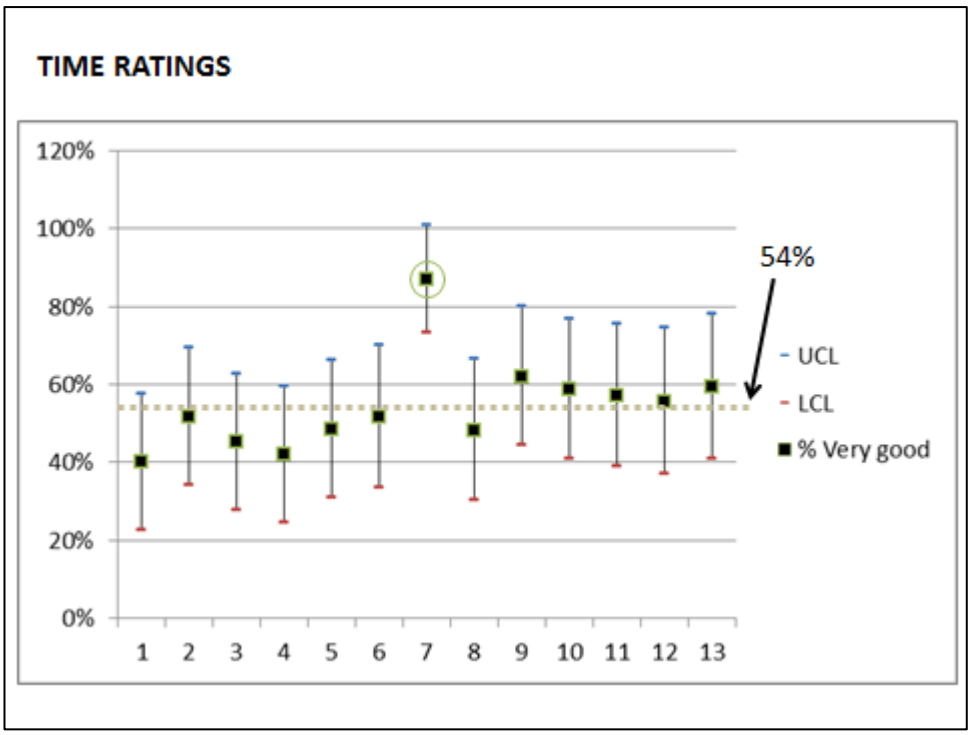

Figure 137: Time allocated to the session analysis (January 2017 cohort)

Across all modules there were few responses to the module specific open questions and these did not convey significant information.

The request for 'general comments' was more successful with 61% of respondents offering a comment. Two themes were evident. Firstly, participants valued the time they had with colleagues to get to know them and work on their projects. Secondly, they felt that the workshops provided content that was transferrable back into the workplace. Figure 138 shows illustrative comments.

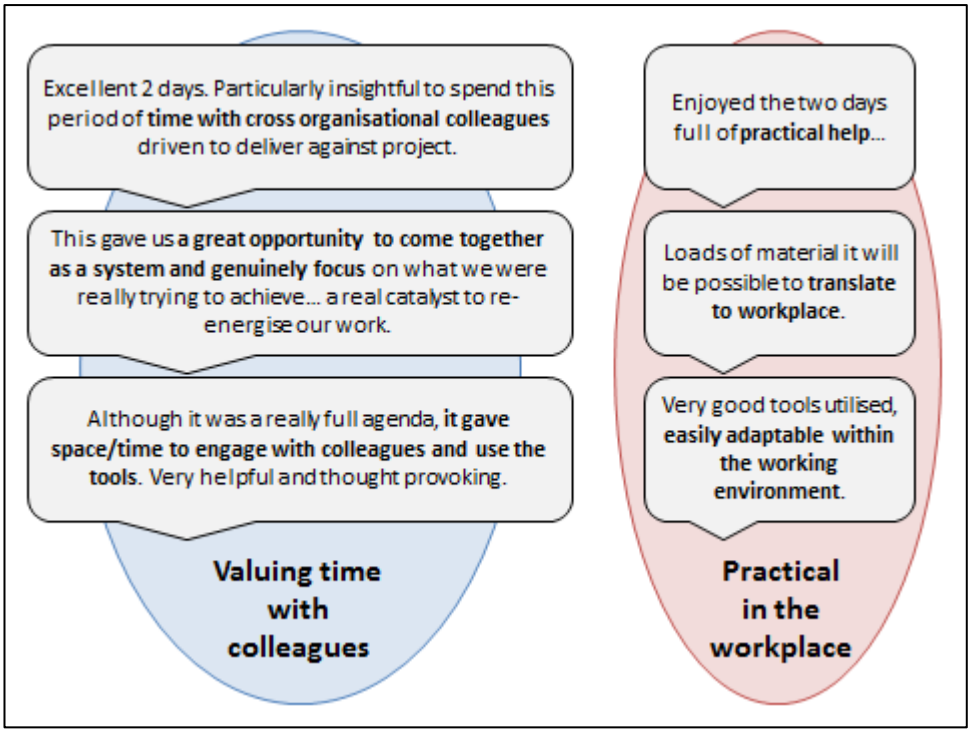

Figure 138: Illustrative comments (January 2017 cohort workshop questionnaires)

<u>May 2017 cohort</u>

This Insights programme was delivered to an internal NHS Improvement cohort. Due to internal interest in programme assessment a simplified rating scale was used to provide a clearer differentiation between good and bad responses to the programme (i.e. the use of a three-point scale). It was also decided to include two rating questions about recommending the programme to others.

The questionnaire was designed in collaboration with ACT Academy members and was based on the structure shown in Table 29.

Module specific	
Ratings	• How useful do you believe the content presented in this module could be for supporting transformational change? (very good / somewhat / not at all)
Open comments	• Which concepts, tools or techniques did you find particularly helpful?

	• Can you provide an example of how you might use the content from this module in your work? • Is there anything you would add to this module or change about it?
Overall programme	
Ratings	• Would you recommend this programme to colleagues within NHS Improvement? (Y / N) • Would you recommend this programme to colleagues within NHS trusts and systems? (Y / N)
Open comments	• What has been the most helpful aspect of programme? • What has been the least helpful? • Are there any tools which would be useful to standardise across NHS Improvement?

Table 29: Structure of the May 2017 cohort workshop questionnaires

This design reflected a decision to reduce the number of ratings per module and increase the emphasis on open comments.

For the two days of the programme the response rates were 54% and 50%. Although these were lower than hoped for, they still provided a significant pool of responses.

The content of each module was rated as 'very good' by between 67% and 97% of respondents (with the exception of one module). A statistical analysis of 'very good' ratings as a proportion of all ratings for each module is shown in Figure 139. Table 30 shows the modules that were statistically above or below the mean rating. In addition, 12 participants responded to the two recommendation questions with 100% saying they would recommend the programme internally and externally.

Modules rated significantly higher than the mean rating	
Content	• Overview of transformational change • So what works? • Personal leadership of change
Modules rated significantly lower than the mean rating	

Content	• How will you tackle your change?

Table 30: Summary of statistically significant ratings (May 2017 cohort)

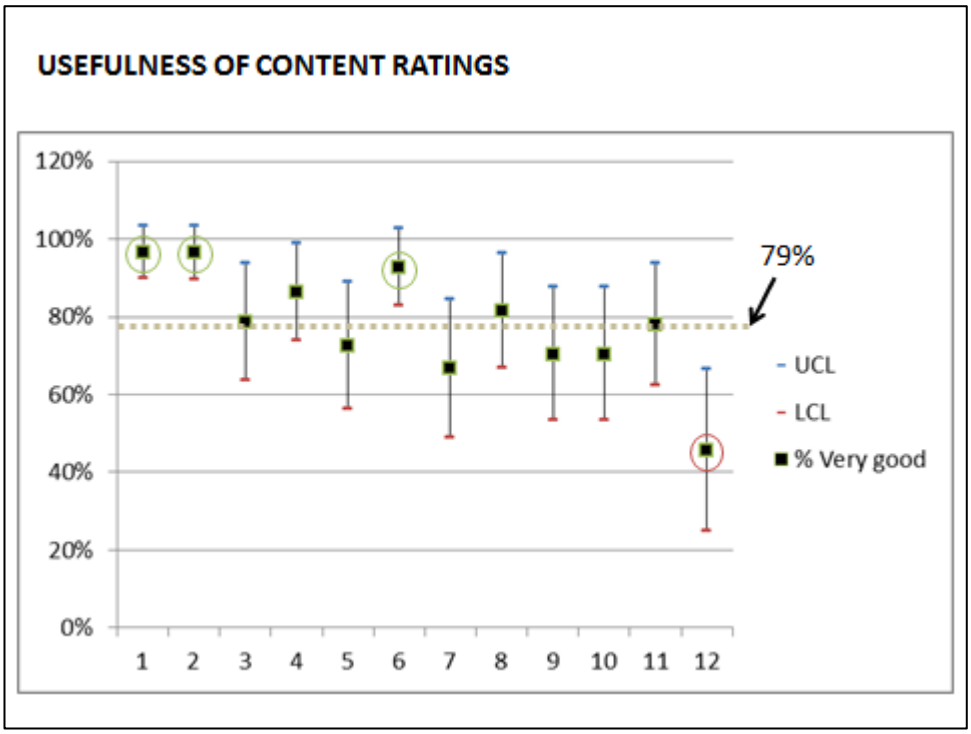

Figure 139: Content usefulness analysis (May 2017 cohort)

A total of 263 comments were made in relation to the module related questions, representing a completion rate by respondents of 26%.

Comments were not thematically analysed but were reviewed by faculty members. They were also independently assessed and summarised by an ACT Academy member who had observed the programme and had conducted brief, confidential interviews during the two days. These interviews were used to triangulate questionnaire comments.

These processes identified that

- Some participants said that the content of modules was not new to them but still helpful as a reminder. This suggested the programme had a role in reinvigorating forgotten or dormant practice.
- Others noted that content reinforced existing viewpoints, suggesting that the programme was at some level serving to legitimise practice.
- The higher ratings for the early overview modules indicated that participants particularly valued how the programme challenged the prevailing planning mindset.

Within the individual modules the comments were overwhelmingly supportive of the content. Some modules appeared to promote more new thinking for participants than others. For example

- new awareness of how to view systems (e.g. the systems thinking practices described by Senge, 1991),
- interest in the personal leadership aspects of change and the practice of 'public narrative' (e.g. Ganz, 2011),
- contrasts between hierarchical models of control and distributed leadership and the role that 'simple rules' can play (e.g. as described in Best et al., 2012)
- models that can be applied to understanding resistance (e.g. Bridges, 1995).

The independent review of the programme-wide comments suggested a number of mechanisms that supported participant intentions to use the content. These included

- the flow of content and its coherence as a whole (i.e. the structure of the programme made it more convincing);
- perceptions about the expertise of faculty, derived from their confidence and articulation when presenting and responding to questions;
- motivational aspects created by experiencing the materials (i.e. feeling energised to try new things); and
- having practical tools that they could use in systems.

These are illustrated with quotations from the questionnaires in Figure 140.

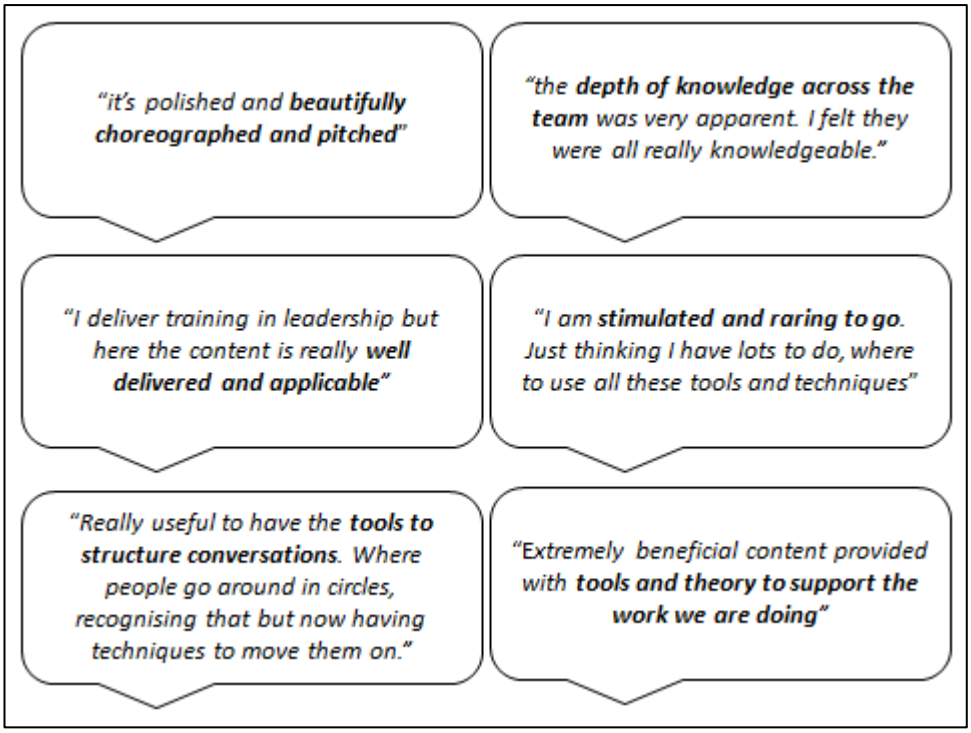

Figure 140: Examples of general comments (May 2017 cohort workshop questionnaires)

Participants also suggested ways to improve the programme. These centred on its intensity (i.e. a high volume of content in a short period) and the need for more real-life examples of the application of the programme content.

June 2017 cohort

This Insights programme was delivered to senior public sector staff working within STPs (Sustainability and Transformation Partnerships). The questionnaire structure followed that used for the May 2017 programme (Table 29) with minor alterations. A five-point rating scale (i.e. very good, good, fair, poor and very poor) was introduced to provide more detailed data.

Response rates for both days were 45%. Again, this was lower than hoped for but sufficient to provide some insight into participant experiences that could be correlated with the views of faculty members present at the workshop.

A statistical analysis of 'very good' ratings as a proportion of all ratings for each module is shown in Figure 141. One module rated below the mean ('Using safe to fail experiments').

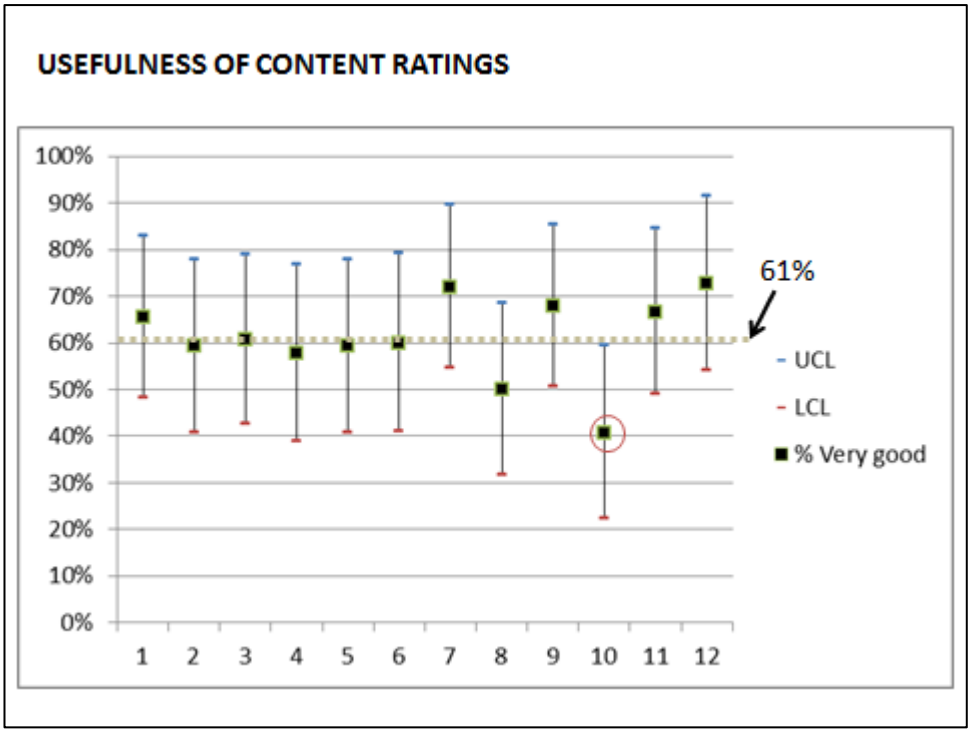

Figure 141: Content usefulness analysis (June 2017 cohort)

A total of 201 comments were made in relation to the module questions, representing a completion rate by respondents of 33%.

As with the previous Insights programme, comments did not undergo a full thematic analysis but were reviewed by faculty members and independently assessed and summarised by a non-faculty ACT Academy member.

Across the modules it could be seen that

- participants generally found the programme content practical and relevant to their work;
- like the previous cohort they also wanted more NHS examples; and
- they showed significant interest in complexity derived concepts (e.g. 'simple rules' and 'attractor patterns' were viewed as helpful new approaches linked to system wide working).

Their overall comments on the programme reflected two main themes.

- The benefit of being exposed to a breadth of concepts and tools.
- The thinking time created by the programme.

These are illustrated in Figure 142.

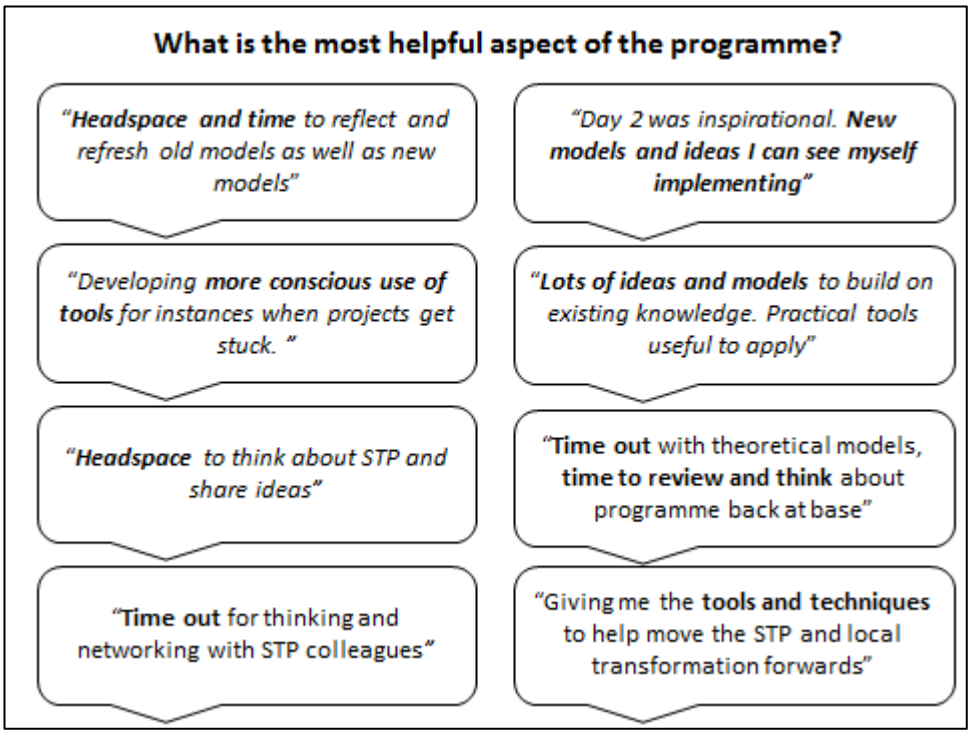

Figure 142: Examples of comments from the June 2017 cohort questionnaires

<u>September 2017 and October 2017 cohorts</u>

The May 2017 and June 2017 Insights programmes were used as part of the recruitment process for two newly designed team-based programmes. As described in Table 6 these were an 'open' programme in September 2017 and a 'UEC' cohort in October 2017. Since these two cohorts were delivered in parallel, evaluation processes were combined across them.

As these were a new design of programme, faculty were interested in module level feedback as well as more holistic view on the participants' experiences. The questionnaire was therefore based on the structure shown in Table 31 and designed in collaboration with ACT Academy members.

Module specific	
Ratings	• Please rate the relevance of the module content. • Please rate the delivery of the module content.

	(5 boxes, left most labelled 'very good', right most labelled 'very poor')
Open comments	• Additional comments
Day specific	
Ratings	• Please rate the structure of the workshop day. (5 boxes, left most labelled 'very good', right most labelled 'very poor')
Open comments	• What worked well? • What could be improved?
Overall programme	
Open comments	• Any other comments

Table 31: Structure of the 2017 cohorts' workshop questionnaires

Compared to previous team programme evaluations this reduced the number of module specific ratings and simplified the feedback on each module.

The questionnaire procedures followed those described in Section 6.1. Overall the response rate across both programmes was 50%.

Statistical analysis across all modules is summarised in Table 32 and shown in Figure 143 and Figure 144.

	Modules rated significantly <u>higher</u> than the mean rating
Content	• Building trust and understanding with others • Creating a vision • Using public narrative • Managing polarities
Delivery	• Using public narrative • Managing polarities • Fresh eyes

	• Six thinking hats
Modules rated significantly lower than the mean rating	
Content	• World café (Workshop A) • Role modelling • Managing your programme • Exploring VUCA • Using simple rules • Safe to fail experiments
Delivery	• Role modelling • Managing your programme • Exploring VUCA • Using simple rules • Safe to fail experiments

Table 32: Statistically significant ratings (September and October 2017 cohorts)

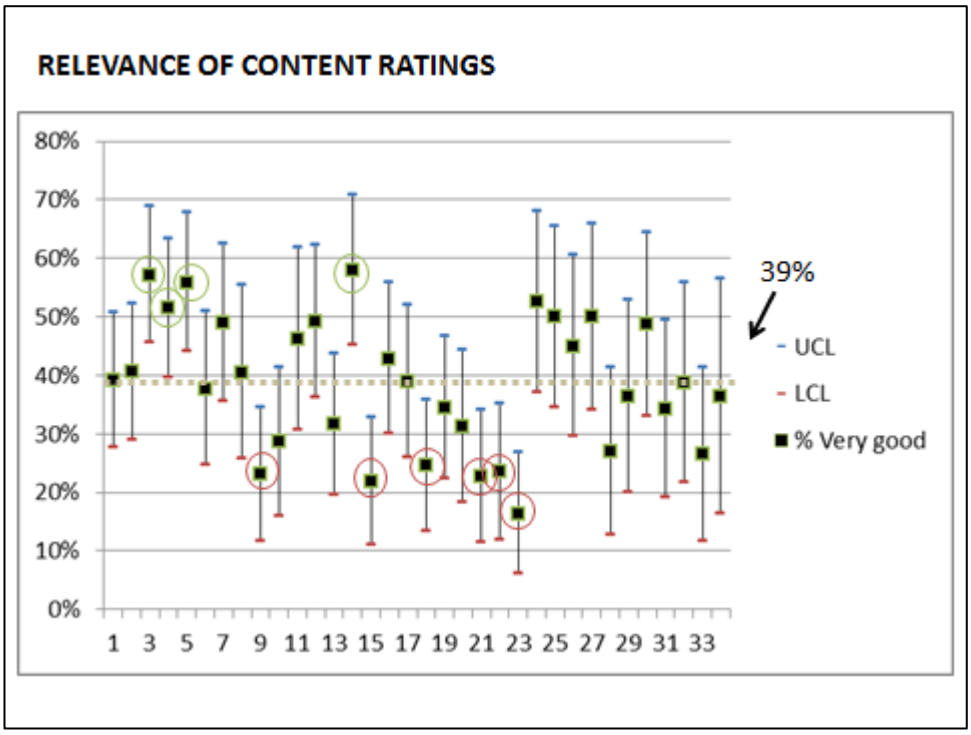

Figure 143: Content relevance analysis (Sept & Oct 2017 cohorts)

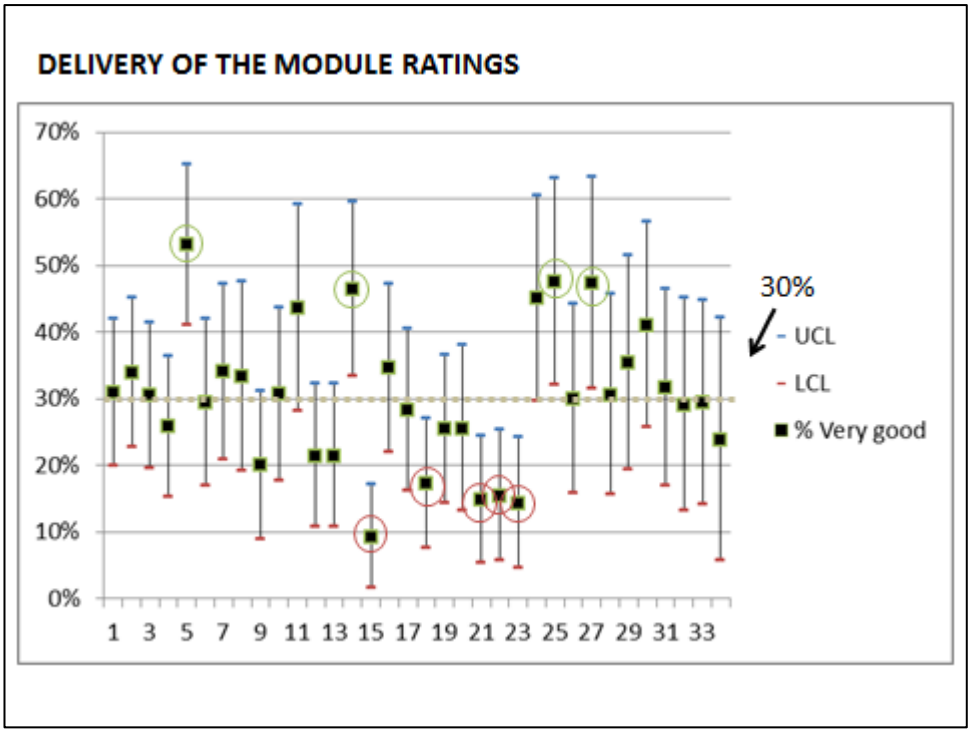

Figure 144: Delivery of modules analysis (Sept & Oct 2017 cohorts)

Statistical analysis was also undertaken at the workshop level as after action reviews were undertaken after each workshop to inform subsequent workshops. This analysis is shown in Figure 145 to Figure 150 and in Table 33 and Table 34.

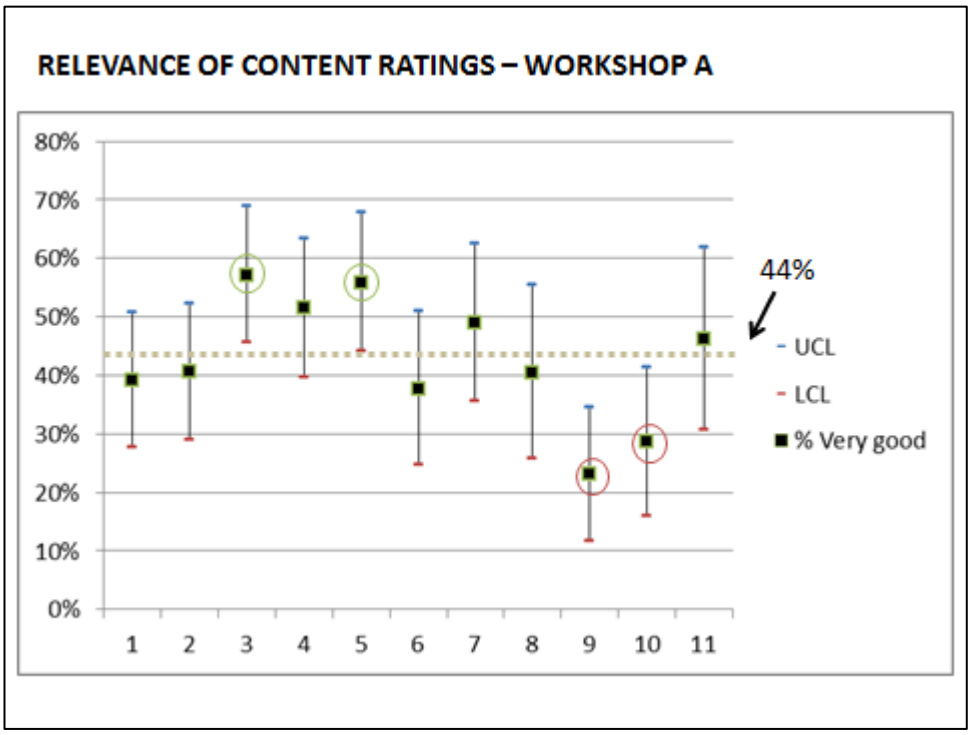

Figure 145: Content relevance analysis (Sept & Oct 2017 cohorts, workshop A)

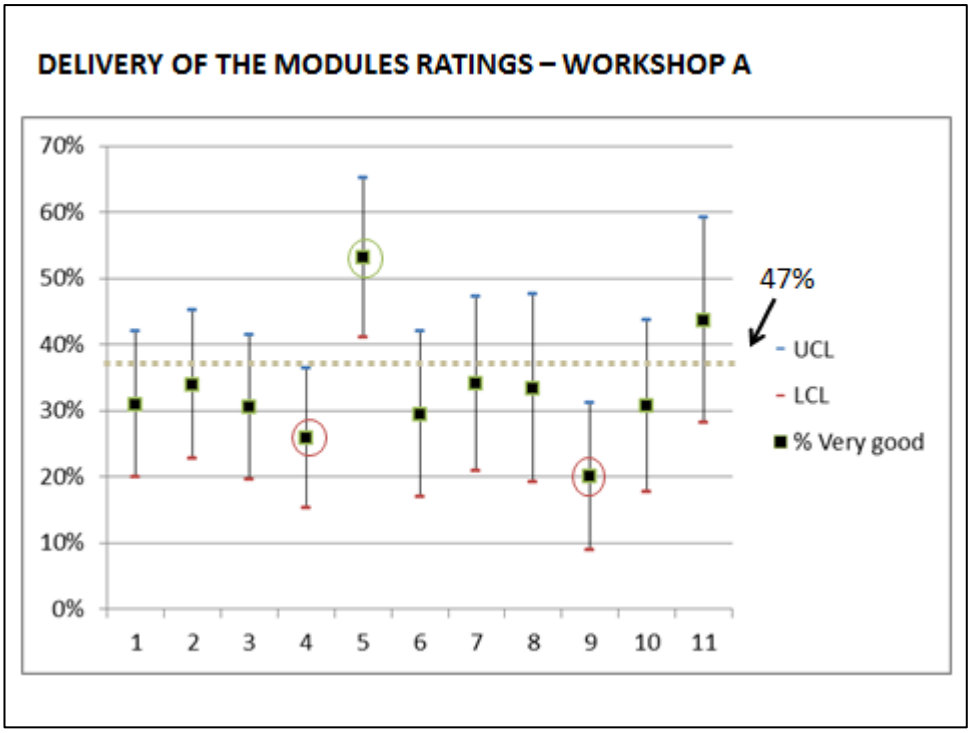

Figure 146: Delivery of modules analysis (Sept & Oct 2017 cohorts, workshop A)

	Modules rated significantly <u>higher</u> than the mean rating
Content	• Building trust and understanding with others • Using public narrative
Delivery	• Using public narrative
Modules rated significantly <u>lower</u> than the mean rating	
Content	• World café (Workshop A) • Understanding your system using the lens
Delivery	• Creating a vision • World café

Table 33: Summary of statistically significant ratings (Sept & Oct 2017, workshop A)

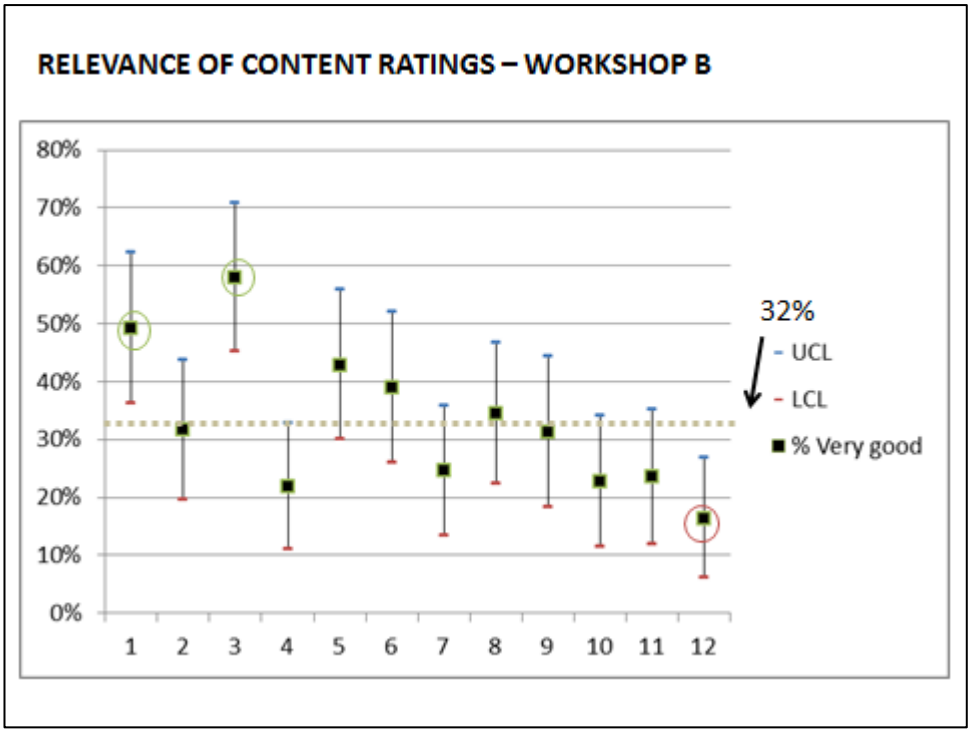

Figure 147: Content relevance analysis (Sept & Oct 2017 cohorts, workshop B)

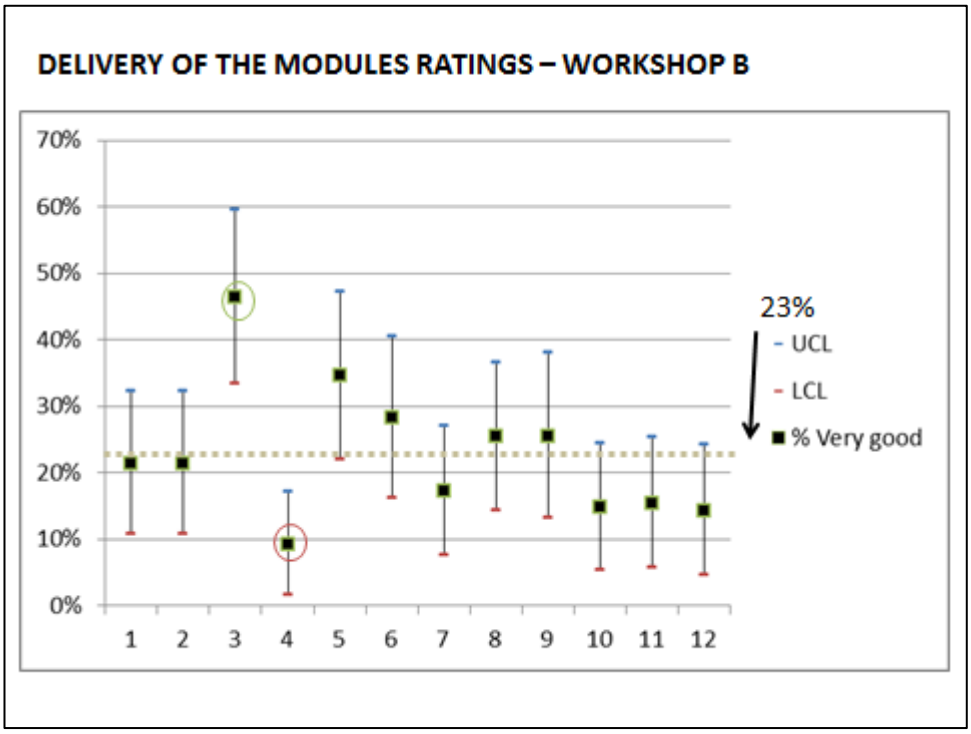

Figure 148: Delivery of modules analysis (Sept & Oct 2017 cohorts, workshop B)

	Modules rated significantly <u>higher</u> than the mean rating
Content	• Systems thinking

	• Managing polarities
Delivery	• Managing polarities
Modules rated significantly <u>lower</u> than the mean rating	
Content	• Safe to fail experiments
Delivery	• Personal resilience

Table 34: Summary of statistically significant ratings (Sept & Oct 2017, workshop B)

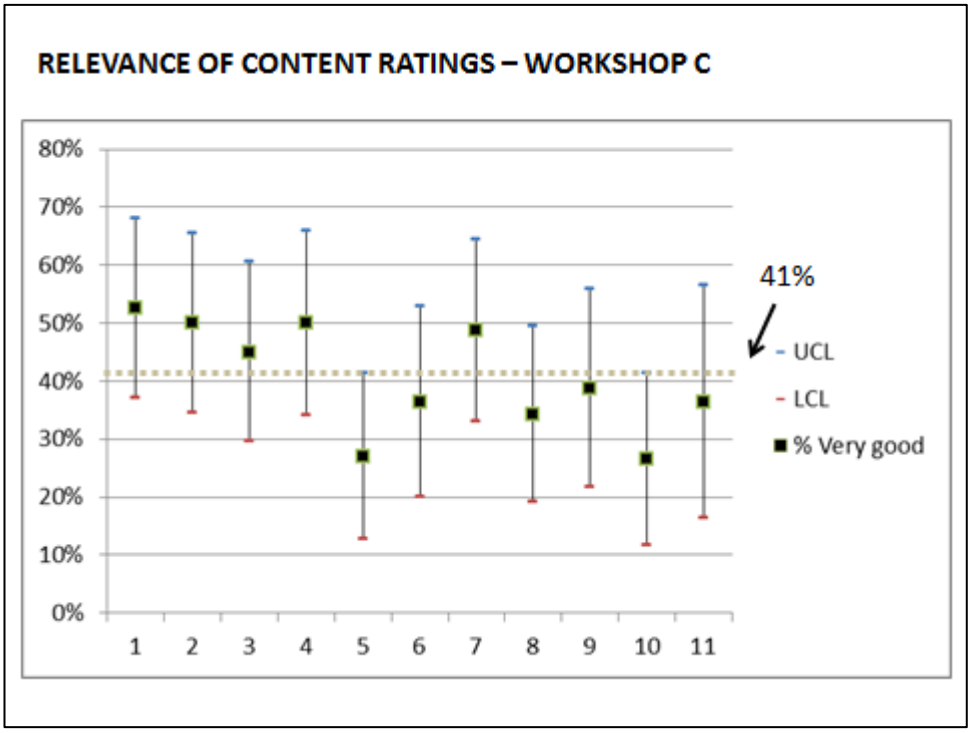

Figure 149: Content relevance analysis (Sept & Oct 2017 cohorts, workshop C)

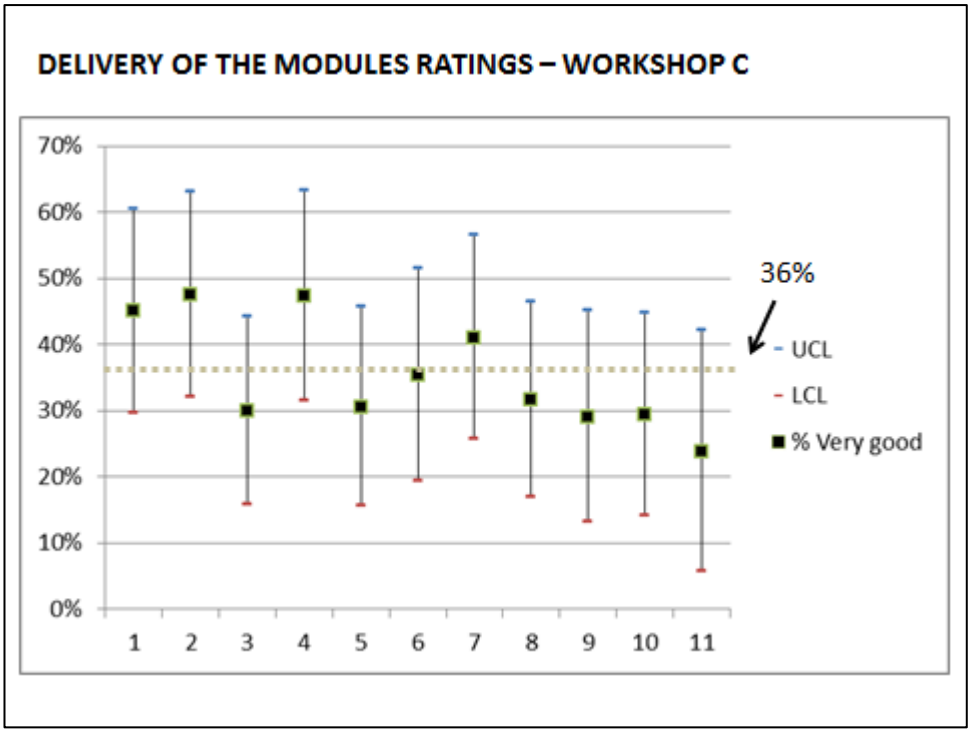

Figure 150: Delivery of modules analysis (Sept & Oct 2017 cohorts, workshop C)

No ratings relating to Workshop C modules were significant when compared to other modules within that workshop.

In addition, analysis was undertaken to consider the correlation between the different rating scales used. For the open cohort Workshop B results Pearson's correlation coefficient was calculated for 'relevance' and 'delivery' ratings. Across 320 paired ratings (from 12 modules) the correlation coefficient was found to be 0.66 (i.e. between a strong value of 0.7 and a moderate value of 0.5).

A total of 582 comments were made in relation to the module related questions, representing a completion rate by respondents of 52%. Across all the modules a number of patterns were evident.

- Positive comments tended to be given when a module's content was new to a participant, had led to a specific insight or helped them to understand their current practice.
- In some modules where participants had contradictory views, this seemed to relate to how relevant the content was to their project at that point in time. This also influenced views on whether activity time was sufficient.

- Across all workshops some participants noted feeling tired towards the end of the two days (i.e. the programme felt intense).
- The assessment of some modules appeared to be influenced by participant's existing knowledge of the content (e.g. modules were rated lower if the material was familiar to a participant).
- The workshop focused on innovation was perceived differently from other days with many more comments about how enjoyable it was.
- Modules that attempted to translate complexity related concepts into activities (e.g. 'simple rules') tended to receive more negative comments.

This final point is interesting since it is a reversal of the position for the Insights programmes where complexity related concepts were viewed positively. One explanation might be that although these concepts are appealing it is less clear how they can be applied in practice, resulting in teams struggling to use them in their projects.

The qualitative comments reinforced the statistical analysis shown in the earlier figures. In particular modules on 'Using public narrative' and 'Managing polarities' were highlighted as key topics on their respective days.

Participants also rated the structure of the workshop days and the statistical analysis comparing the six days is shown in Figure 151. Here, no single day stood out as different from the others. Although the mean percentage that rated the structure as 'very good' appeared low at 26%, this went up to 86% when 'good' was also included.

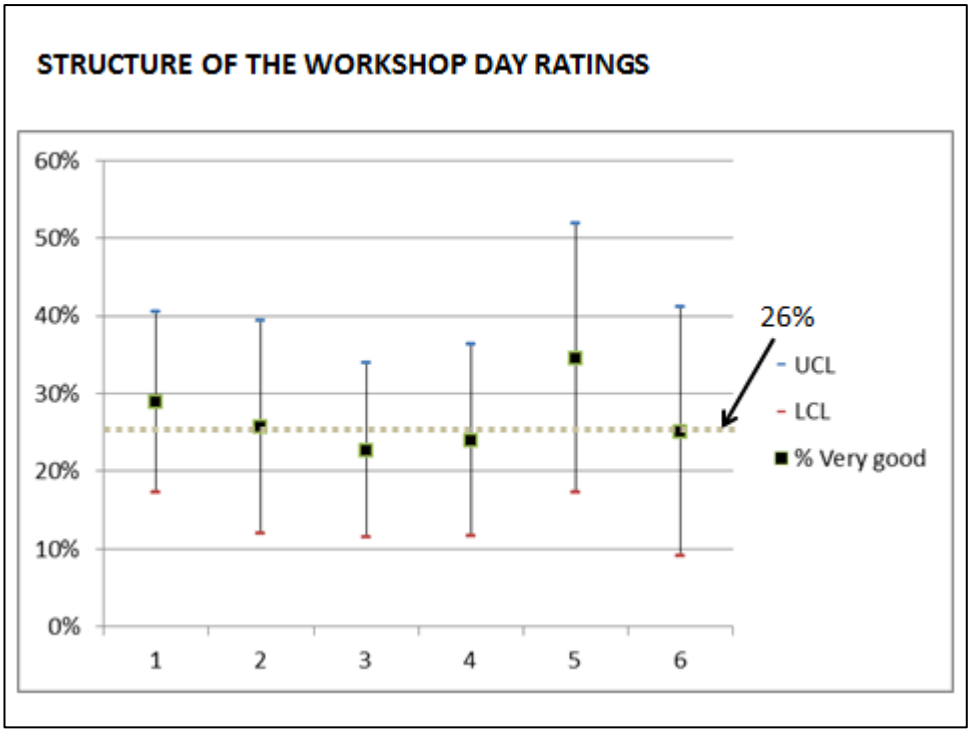

Figure 151: Structure of workshop day analysis (Sept & Oct 2017 cohorts)

A basic content analysis (Hsieh and Shannon, 2005) was undertaken on the summary comments for each workshop day. The resulting themes are shown in Figure 152 ('What worked well') and Figure 153 ('What could be improved').

In Figure 152, 155 comments generated 169 coded items.

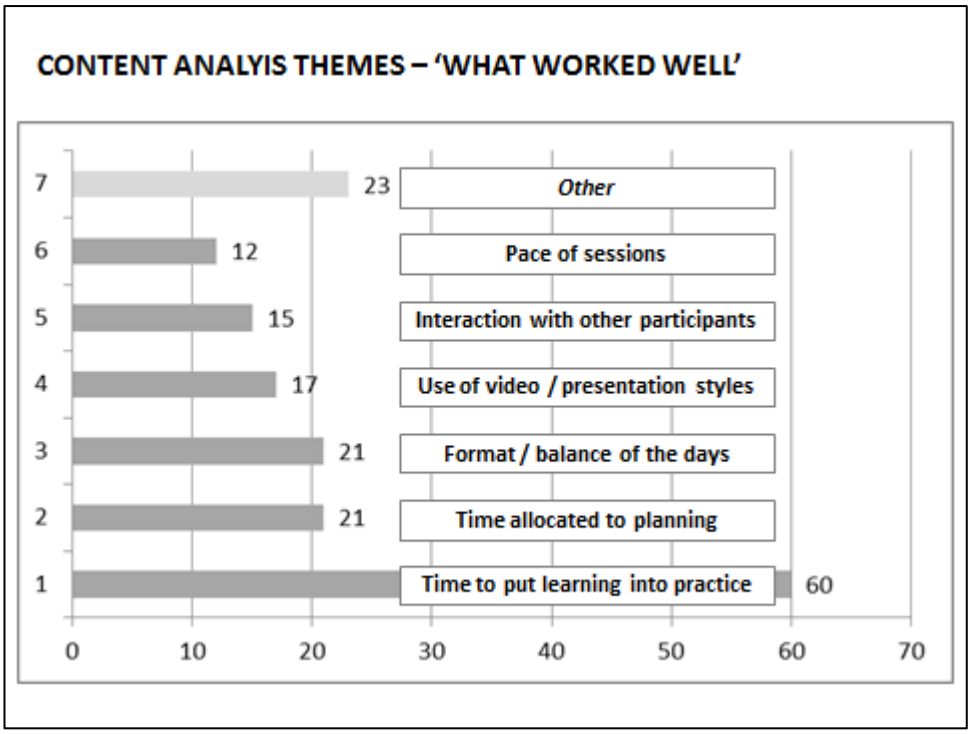

Figure 152: 'What went well' themes (Sept & Oct 2017 cohorts)

In Figure 153, 149 comments generated 148 coded items.

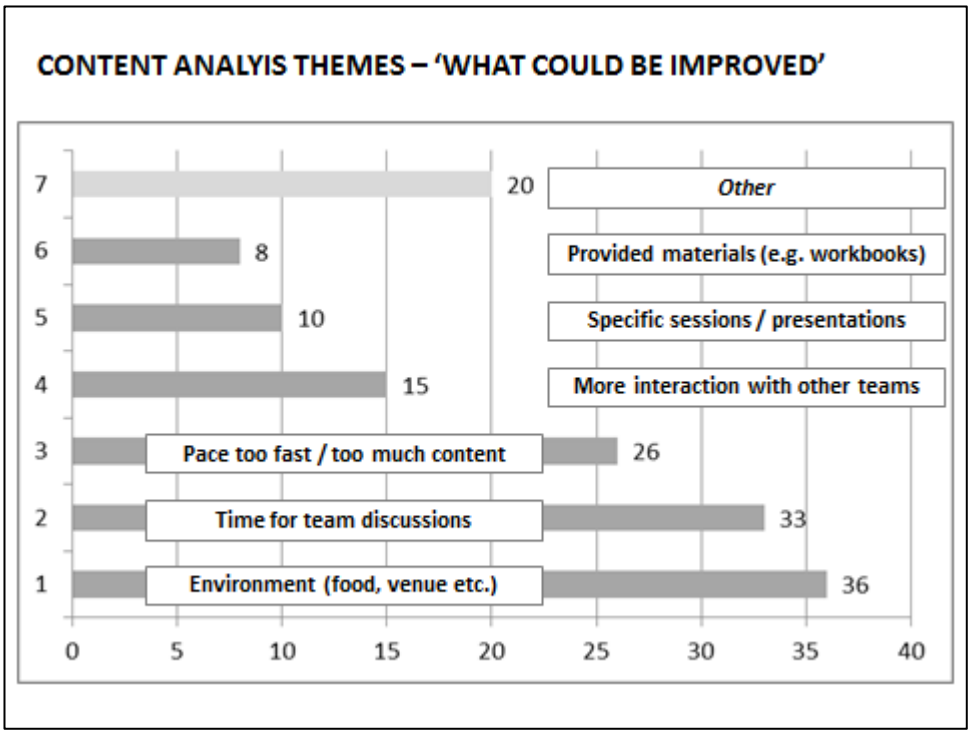

Figure 153: 'What could be improved' themes (Sept & Oct 2017 cohorts)

These two figures show that time and pace featured in both sets of comments. Participants valued the time in their teams to apply the module content or plan (48% of coded comments) but a proportion of the improvement comments (22%) related to wanting more time. Linked to this was a view (18%) about the fast pace and intensity of the days (e.g. advocating less content). There were also indications that participants valued the interaction across the teams and wanted more of this. These views were echoed in the participants' overall comments on the programme.

Overall out of 29 participants who answered the question about recommending the programme to a colleague, 26 (89%) said they would with a further 2 (7%) unsure and 2 (7%) saying they would not recommend (due to the structure of the programme).

As with all other programmes, faculty discussions took place after each workshop to review the participant feedback. Formal 'after action reviews' were set up after each October 2017 workshop to discuss both cohorts. Appendix I contains the notes from these reviews. In addition, seven interviews were undertaken with participants from these cohorts as discussed in Section 8.1. Collectively, all of this fed into the design of the February 2018 programme.

February 2018 cohort

This open, team-based programme was designed based upon the accumulated experience from the previous programmes. In particular it adapted the design from the September 2017 and October 2017 programmes by

- removing some of the lower rated modules,
- increasing the time for activities, and
- placing more emphasis on time for participant reflections.

The questionnaire was based upon the version used in the preceding team cohorts but with a greater emphasis on day-based ratings in order to allow a more in-depth assessment of the programme structure. Some specific questions were also added to investigate key elements of the programme. The structure is shown in Table 35 and was created in collaboration with ACT Academy members.

Module specific	
Ratings	• Please rate the relevance of the module content. • Please rate the delivery of the module content. (5 boxes, left most labelled 'very good', right most labelled 'very poor')
Open comments	• Additional comments
Day specific	
Ratings	• How would you rate the value of the day? • How would you rate the structure of the day? • How would you rate the pace of the day? • How do you rate the workbook?* • How do you rate the value of reflection time?* • Please rate the value of the day*. • How would you rate the value of time spent action planning and peer review?*

	(5 boxes, left most labelled 'very good', right most labelled 'very poor') * These items were only included for some workshops
Open comments	• What worked well? • What could be improved? • What do you like (about the workbook)? • What could be improved (about the workbook)? • What concepts, tools or techniques did you find most valuable today, and why? • Which of the techniques or concepts do you think you will apply to your programme of work? • Any other comments. • Is there anything you would like to focus on in the future workshops?* * These items were only included for some workshops
Overall programme	
	• How would you rate TCSL overall? (5 boxes, left most labelled 'very good', right most labelled 'very poor')
Open comments	• What worked well? • What could be improved? • One word to describe the programme. • Any other comments.

Table 35: Structure of the February 2018 cohort workshop questionnaires

The questionnaire procedures followed those described in Section 6.1. Overall the response rate across the workshops was 63%.

Statistical analysis is shown in Figure 154 to Figure 156and summarised in Table 36.

	Modules rated significantly higher than the mean rating

Content	• Creating a vision • Developing driver diagrams • Fresh eyes
Delivery	• Introducing innovation • Fresh eyes • Six thinking hats
Modules rated significantly lower than the mean rating	
Content	• Comfort zones • Safe to fail experiments • Different conversations
Delivery	• Safe to fail experiments • Different conversations

Table 36: Summary of statistically significant ratings (February 2018 cohort)

The different design of this programme from previous cohorts (*September 2017 and October 2017*) means that comparing results can only be done with caution. However, Table 32 and Table 36 have some modules in common.

- 'Creating a vision' is rated significantly high for the relevance of its content.
- The innovation tools of 'Fresh eyes' and 'Six thinking hats' are rated significantly highly for delivery.
- 'Safe to fail experiments' is rated significantly low across both measures.

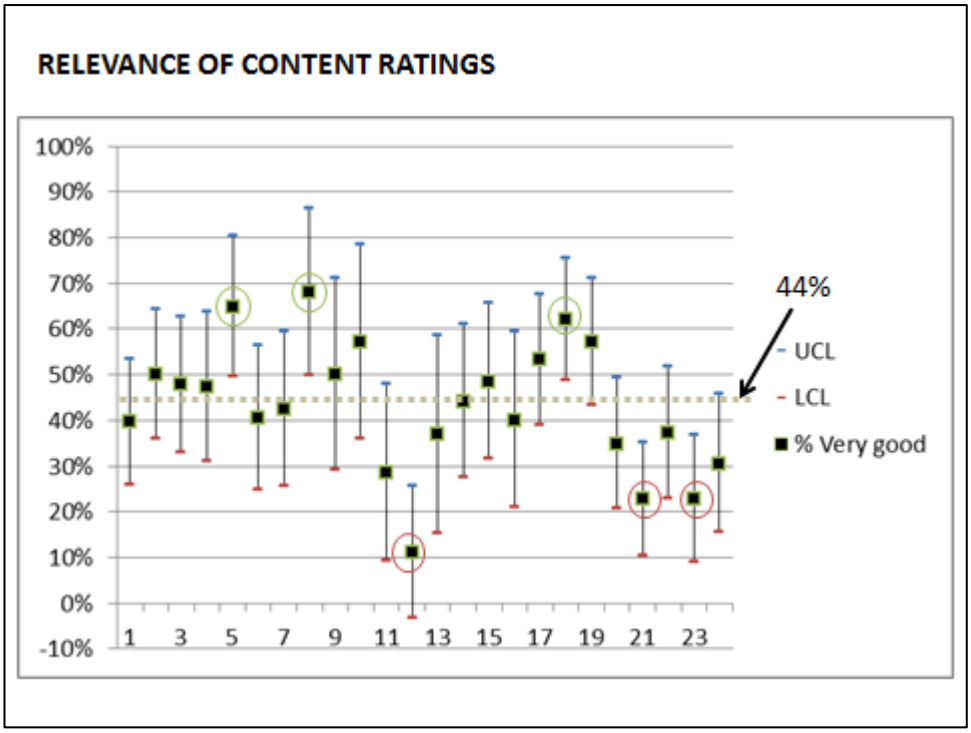

Figure 154: Content relevance analysis (February 2018 cohort)

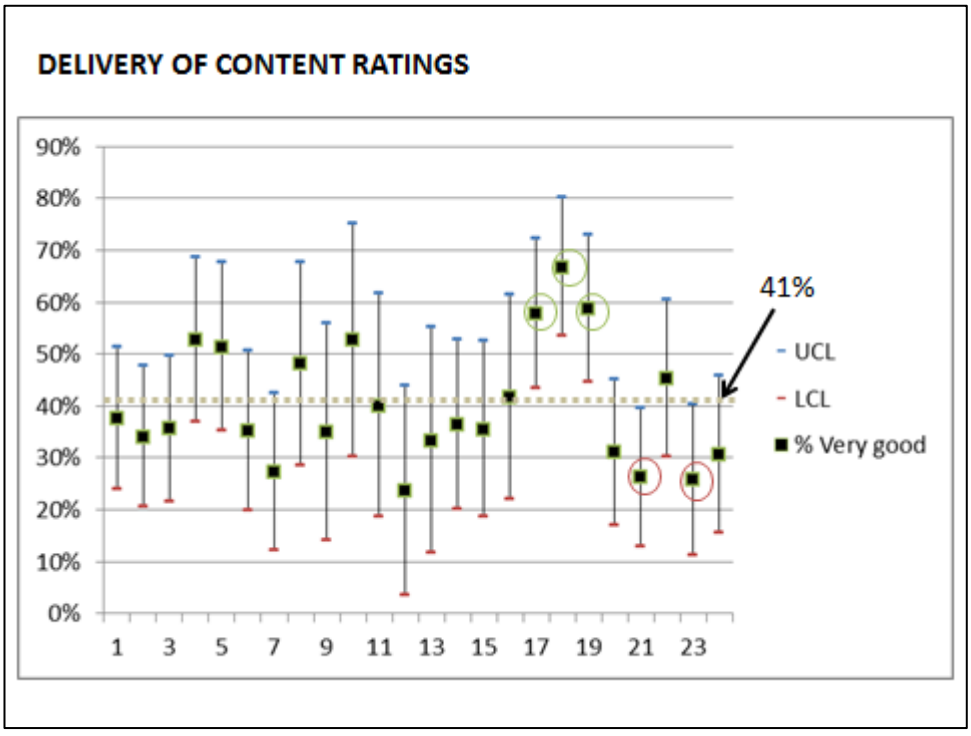

Figure 155: Delivery of content analysis (February 2018 cohort)

The mean 'very good' rating achieved across all modules in Figure 154 (44% or 374/848) can be compared to that found for the 2017 programmes (39% or 653/1676). A 95% confidence

interval analysis shows overlapping confidence intervals for these results and thus they are not statistically different.

Participants also rated the structure of the workshop days and the statistical analysis comparing the six days is shown in Figure 156. Only the structure of the fifth workshop day (based upon the theme of innovation) was identified as signiticantly different from other days with a higher than average rating.

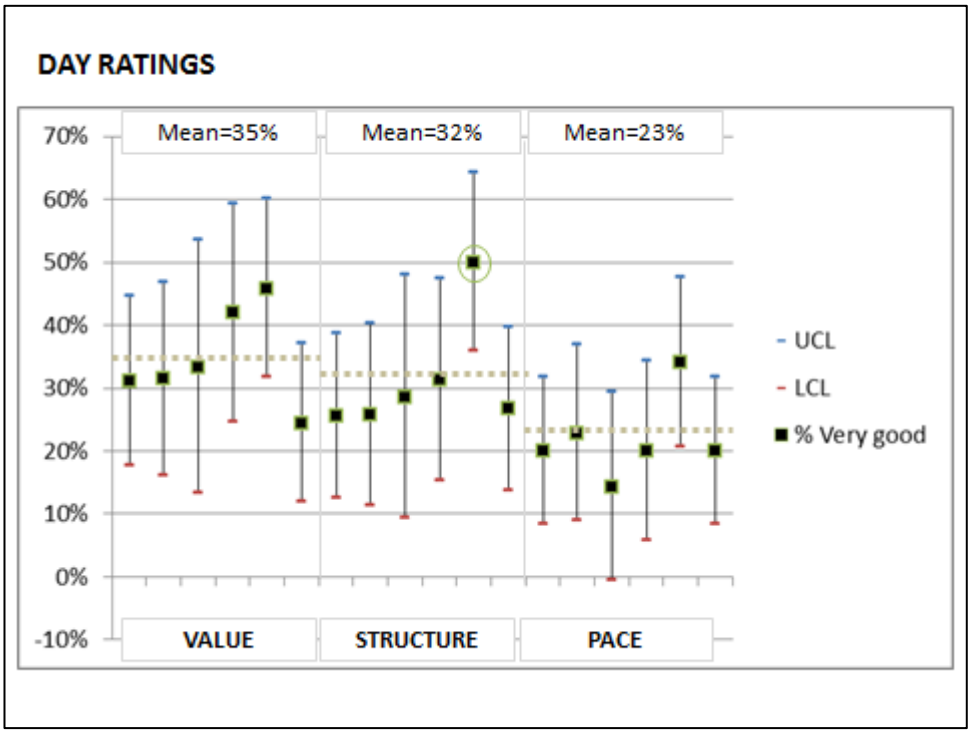

Figure 156: Value, structure and pace analysis (February 2018 cohort)

A total of 243 comments were made in relation to the module related questions, representing a completion rate by respondents of 52%. Across all the modules a few patterns were evident.

- Some modules seemed to be valued for how they triggered important conversations.
- Views were mixed on the value of the new reflection-based sessions. While some participants liked them, others disliked being asked to reflect 'on demand' or would have preferred to use the time for team discussions.
- Compared to previous cohorts there were less comments about inadequate time for discussions.

As was done for the preceding cohorts, a basic content analysis (Hsieh and Shannon, 2005) was undertaken on the summary comments for each workshop day. The resulting themes are shown in Figure 157 ('What worked well') and Figure 158 ('What could be improved').

In Figure 157, 149 comments generated 192 coded items.

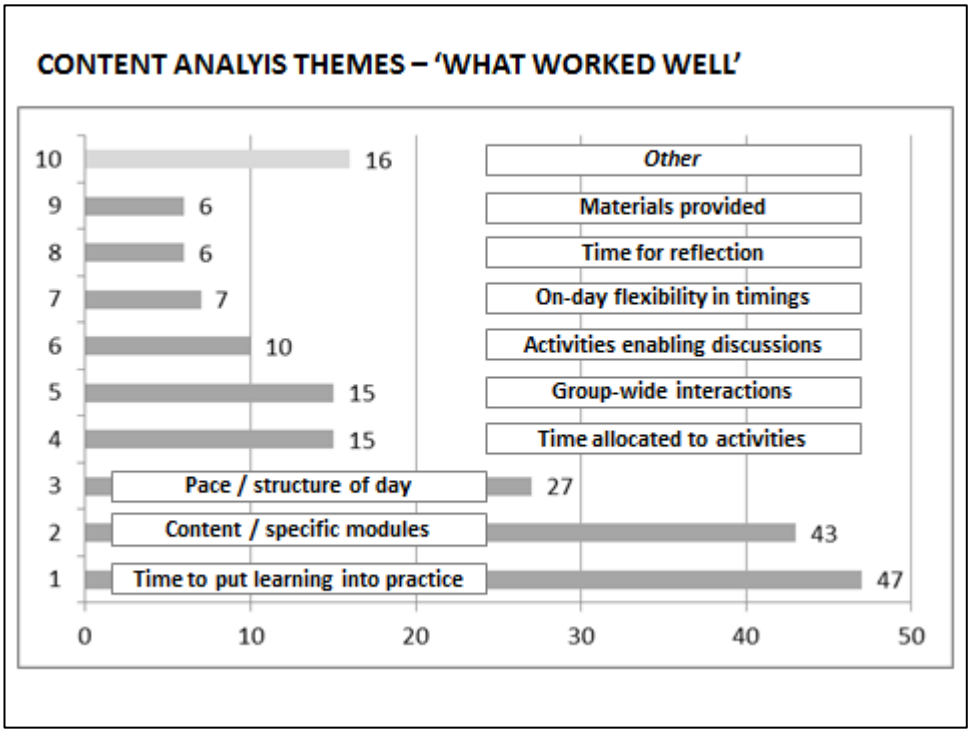

Figure 157: 'What went well' themes (February 2018 cohort)

In Figure 158, 94 comments generated 94 coded items.

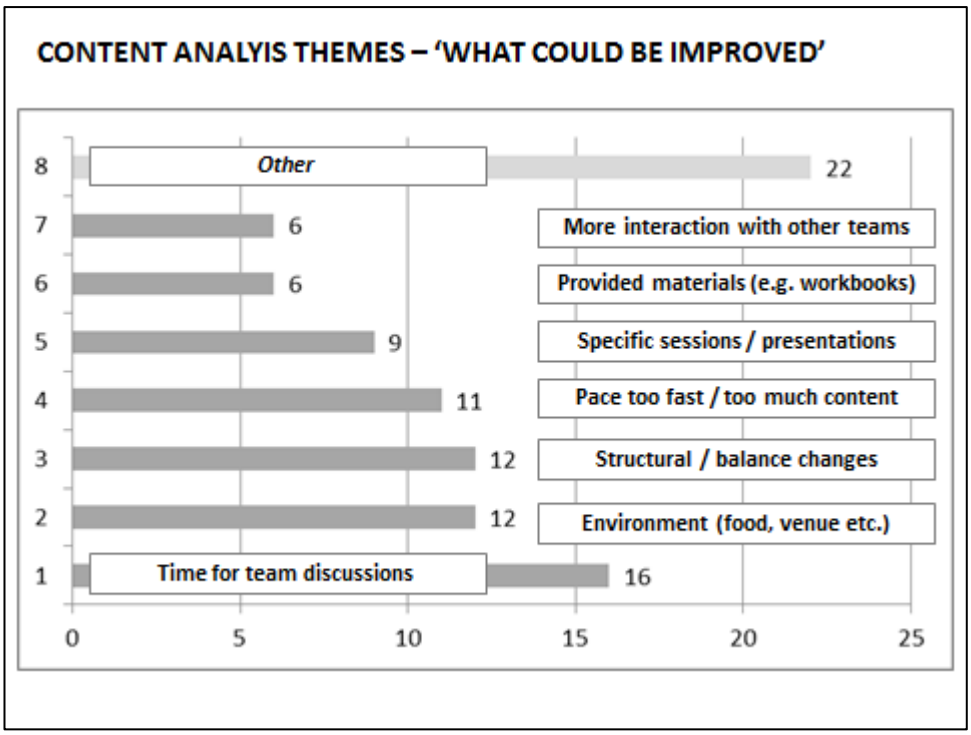

Figure 158: 'What could be improved' themes (February 2018 cohort)

As with the previous cohorts, both sets of comments show themes relating to the time available.

An approximate comparison can be made to the findings for the previous cohorts by combining some of the theme categories and calculating the number of comments per respondent. This is shown in Figure 159 and Figure 160.

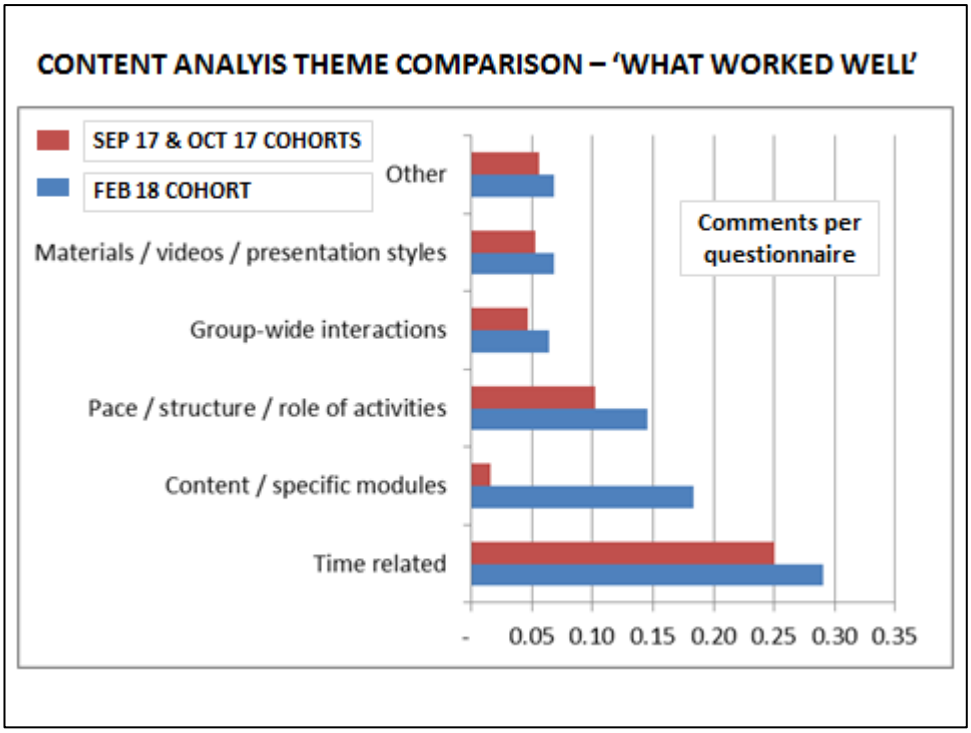

Figure 159: 'What went well' theme comparison (Feb 2018 and 2017 cohorts)

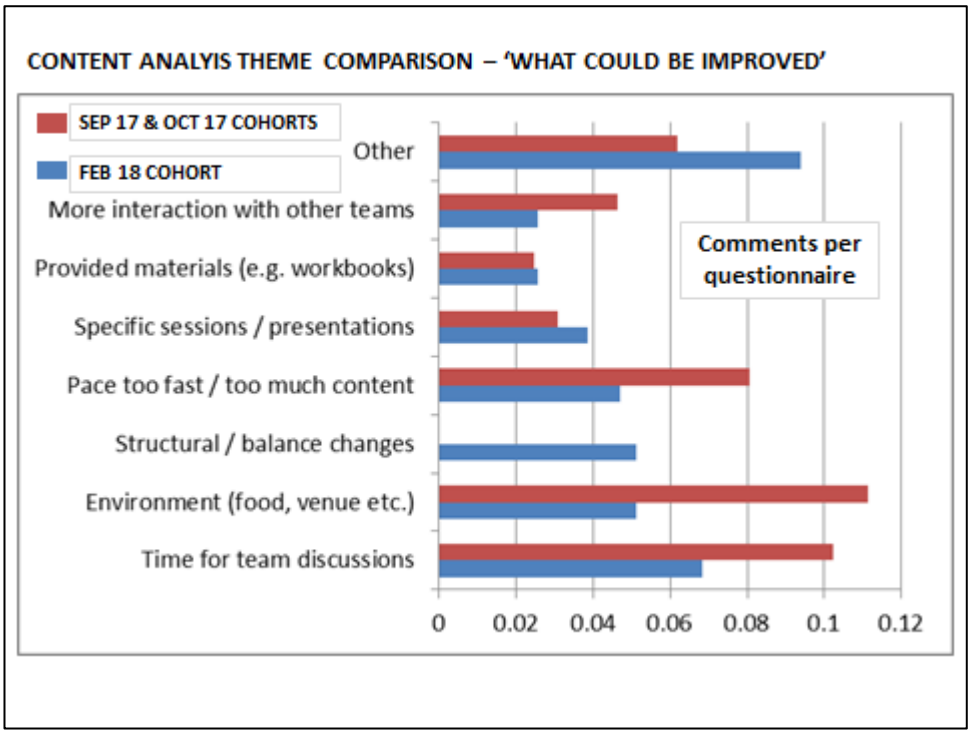

Figure 160: 'What could be improved' theme comparison (Feb 2018 and 2017 cohorts)

These comparisons of themes show that in broad terms the different cohorts identified the same factors with the same frequency for 'what worked well'. The exception was that the *February 2018* cohort also made frequent comments about specific modules. This could be attributable to differences in how the questionnaire purpose was described to the different cohorts.

For ‘what could be improved’, the frequency of some theme categories varied more between cohorts. For example, the environment was less of a problem for the *February 2018* cohort. For programme related themes it appears from Figure 69 that time, pace and the desire for more interactions with other teams were still issues for some participants but less than in the previous cohorts. There were however more suggestions being made for structural changes to how the days were designed.

Overall out of 32 participants who answered the question about recommending the programme to a colleague, 29 (91%) said they would with a further 1 (3%) unsure and 2 (2%) saying they would not recommend (due to the structure of the programme).

For the February 2018 cohort a decision was made to try and assess how the participants’ use of TCSL concepts, tools and techniques had changed during the programme. The nine factors framework (introduced in Section 5.2) provided a vehicle for this as it describes sets of key action areas associated with the TCSL version of transformational change.

In TCSL programmes the nine factors are converted into nine sets of paired statements that are used by participants to assess and discuss their current actions. These statements were revised in the cycle described in Section 12.1. The paired statements which are scored on a five-point scale (-2 to +2). These use a semantic differential scale where two contrasting statements are offered to define the opposing ends of the scale (Teddlie and Tashakkori, 2009).

To assess each team’s progress in using TCSL concepts, tools and techniques, the February 2018 participants were asked in their teams to agree scores for each of the nine areas in their ‘A’ and ‘C’ workshops (i.e. four months apart). These could either be negotiated agreed scores or as an average of individual assessments. The scores were then collected by the faculty.

Of 11 teams within the cohort, start and end scores were collected for nine teams. Two teams were unable to agree their ‘C’ workshop scores.

These scores were analysed in a number of ways based upon the calculation of 95% confidence intervals (following the methods described in Gardner and Altman, 1989).

Figure 161 shows the changes in the mean scores over the programme for each of the nine factors in the framework. All of the mean scores showed an improvement. Figure 162 shows

the scale of these improvements in the mean scores together with their confidence intervals. This demonstrates that five of the factors showed significant improvements.

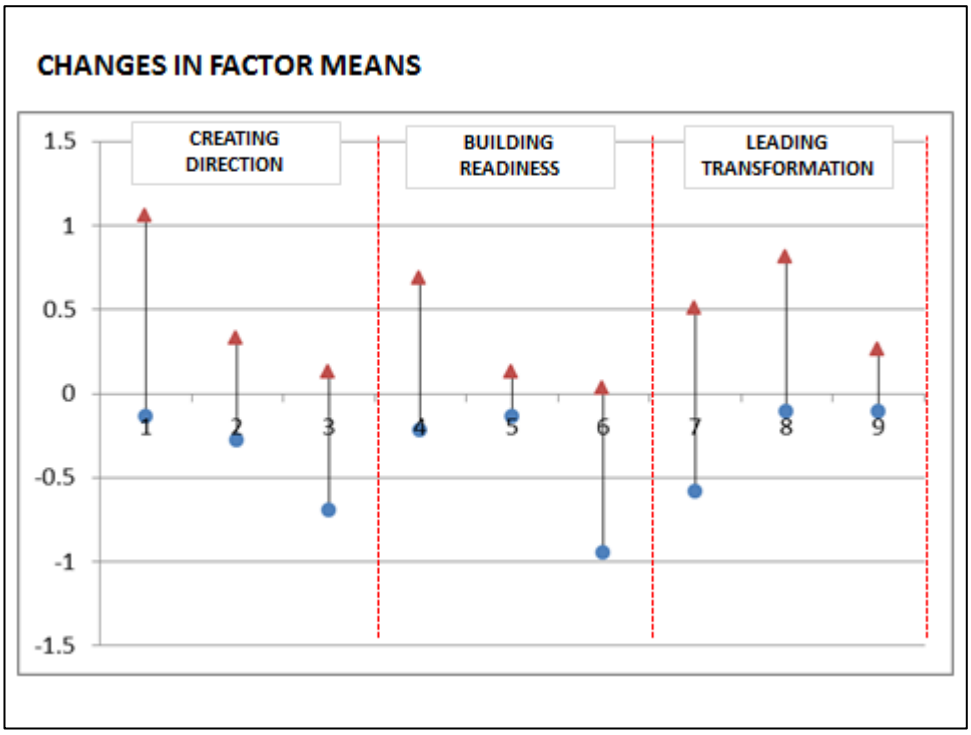

Figure 161: Changes in the mean factor scores in the February 2018 cohort

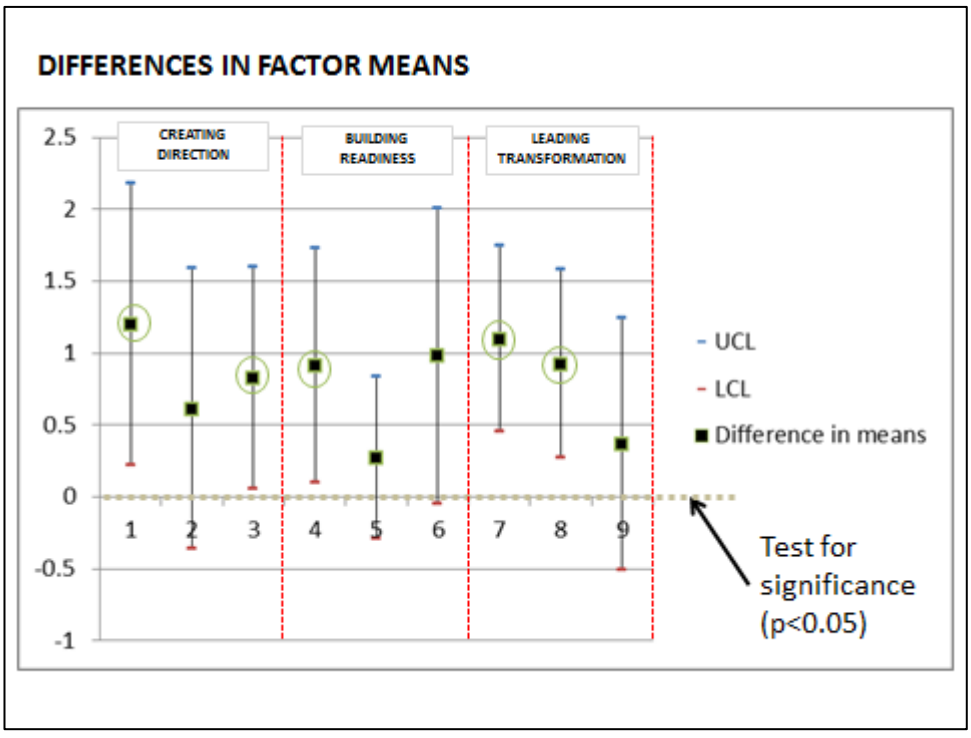

Figure 162: Changes in factor means across all teams (February 2018 cohort)

The same data was also analysed on a team basis, comparing each team's mean scores at the start of the programme with those at the end of the programme. The changes in each

team's mean rating is shown in Figure 163. The scale of change achieved by each team with 95% confidence intervals is shown in Figure 164.

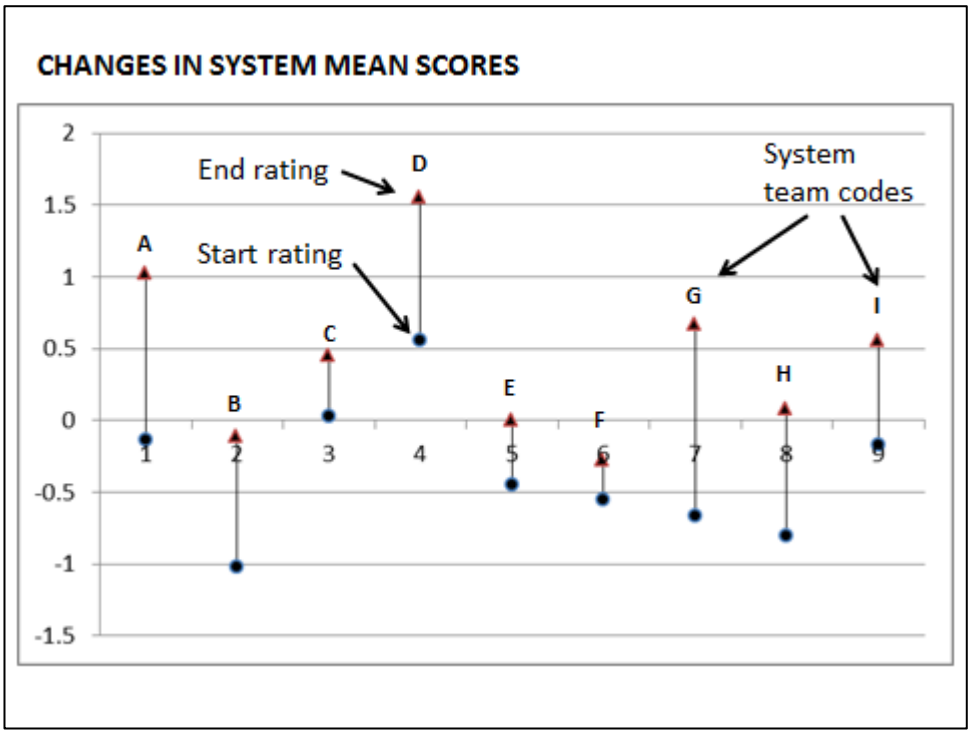

Figure 163: Changes in team mean scores (February 2018 cohort)

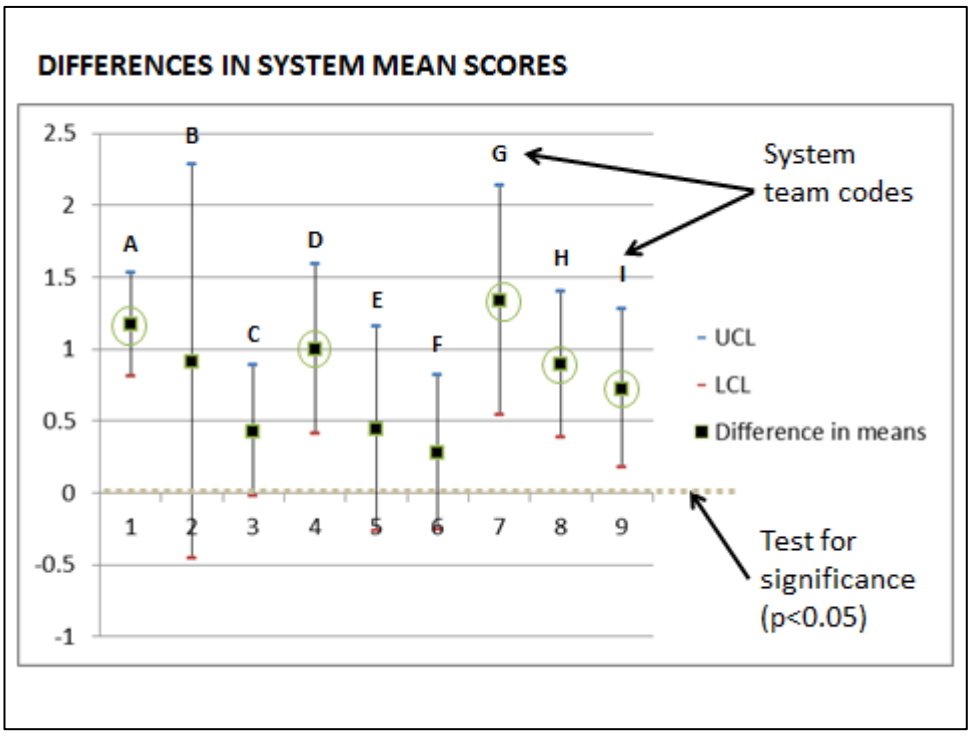

Figure 164: Analysis of the scale of changes in team scores (February 2018 cohort)

Here it can be seen that all nine teams improved over the course of the programme with five showing significant improvements.

The improvements demonstrated in these figures are in line with the goals of TCSL. However, they cannot be definitively ascribed to the programme. It is possible that over the same time period the teams would have made the same inroads without the programme (i.e. naturally adopting TCSL type approaches as part of their change practice).

Three main critiques of this measurement approach need to be addressed in future uses. Firstly, it is unclear if all participants and teams were interpreting the nine factors paired statements in the same way. Secondly, it is possible that assessment biases were occurring (e.g. a desire to show progress). Both of these could be investigated in the future through discussions with participants about their use of the nine factors assessment. Thirdly, the two teams that did not complete the end of programme assessments could have had different rating profiles to other teams. Future data collection would need to ensure data is available from all teams.

Various further refinements of the data collection approach could be applied in future cohorts. For example

- correlating rating scores with team characteristics (e.g. team seniority, stage of change project etc.) to determine how the programme benefits differ according to these factors;
- collecting follow-up data after the programme is complete to determine if TCSL programme effects are maintained or transitory; and
- linking rating scores (or rating profiles across the nine factors) to longer term measures of change success to determine which of the factors are key.

Appendix H The faculty review of six topic areas

This appendix provides a summary of the faculty discussions that took place about six topic areas chosen by the faculty for review (as described in Cycle 4).

Summary of faculty discussions

Table 37 (based upon a summary sent to faculty members) provides details of the key points discussed for each topic and the resulting agreed actions.

Creating a vision

Rationale for discussion: This existing module was perceived as having a weak evidence base.

- An important distinction was recognised between 'communicating' and 'socialising' a vision. The latter was viewed as a more interactive, discussion-based process that encouraged staff to interpret and own the vision. Faculty suggested that socialising should be emphasised more in the module.
- The faculty questioned whether a vision is ever truly complete or if it continues to evolve around a core representation. It was suggested that a vision's local interpretation would result in subtle differences across a system that could ultimately see a vision evolve. It might also evolve as its implementation causes people to reassess their understanding of the vision. These evolutionary processes were suggested for inclusion in the module.
- Faculty discussed how the concepts of shared values and shared purpose differed from a vision. Whilst all three were viewed as aligning actions in different ways a vision was described as also being capable of encompassing competing values and multiple objectives.

Outcome: The module was updated to describe the role of a vision differently in readiness for the September 2017 programme.

Managing your programme in a complex world

Rationale for discussion: Faculty felt that this existing module did not adequately address how to deal with system complexity.

- In facilitating the discussion, I asked faculty to describe their own perceptions of project and programme management. Faculty felt that a similar approach would be useful for participants in helping to explore their own assumptions. For example, identifying why they perceived it as 'hand-cuffs' or 'feeding the beast' (terms used by faculty in describing their perceptions).

- Faculty started to see programme management as a deeper, more cyclical process in complex systems than currently described in the management literature (e.g. potentially encompassing a revisiting of the vision if required).

- In complex systems faculty felt that governance activities might need to shift from quantitative assessments (e.g. was the plan delivered) to more qualitative assessments (e.g. seeking to understand system behaviours).

- The faculty discussed the Heifetz, Grashow and Linsky (2009) suggestion that senior leaders need to take the 'helicopter and balcony' views of a system. We questioned the underlying assumptions in this view that leaders can do this and that their perspective is somehow a better representation of a system than the view afforded to others. This raised questions about whether the helicopter view needed to involve others in the system and how this might be achieved.

- It was suggested that governance arrangements may need to 'flip-flop' between a complexity (emergence) and complicated (planned action) perspective, representing the polarity inherent in these two perspectives.

Outcome: The module was updated to reflect a more cyclical and emergent view of programme management in readiness for the September 2017 programme.

Using qualitative intelligence

Rationale for discussion: This existing module had previously received mixed participant evaluations.

- Faculty discussed shifting the module emphasis from a traditional research-based view of qualitative data to explore how change leaders make better use of the data they routinely pick up in the course of their work. This would emphasise sense-making and ways to avoid bias.

- It was suggested that in many systems their core weakness in relation to qualitative intelligence was not in the practicalities of analysis but rather in their strategic intentions. Qualitative intelligence was often an afterthought and viewed as of lesser importance than quantitative data. Faculty thought the strategic view should be incorporated into the module.

- The faculty questioned how change leaders can pick up weak signals of emergent order or problems. We recognised that traditional quantitative and qualitative methods tended to focus on large (significant) signals but change leadership relied on noticing and reacting to emerging issues.

Outcome: The module was updated to reflect less of a research orientation to qualitative intelligence in readiness for the September 2017 programme.

Improving team effectiveness

Rationale for discussion: This existing module had previously received mixed participant evaluations.

- The module was noted as focusing on describing team deficits. It was therefore suggested it should expand to include good practice.

- Faculty recognised that as well as the module's discussion of the psychological aspects of teams it could also further explore team processes (e.g. the rhythm of team meetings).

- It was recognised that the one-off team self-assessment undertaken in the module needed to be periodically reviewed by teams to maintain their functioning. It was suggested that this was incorporated into action planning sessions.

Outcome: The module was updated in readiness for the September 2017 programme. It included a good practice element in the team assessments.

Developing personal resilience

Rationale for discussion: Faculty members had identified this topic as a potential new knowledge domain.

- Faculty discussed the similarities between personal and system resilience and how some concepts might be transferrable between them. However, it was recognised that system resilience was not simply a product of collective individual resilience and would include other factors (e.g. resource reserves).

- In discussing resilience, the faculty came to recognise aspects of different knowledge domains contributing to resilience. Personal resilience was therefore viewed as a potential emergent property of participation in TCSL. This was recognised as reflecting comments in the longitudinal case studies. Participants saw TCSL as providing a mechanism for normalising 'messiness' in ways that built self-efficacy.

- Faculty also discussed some of the behaviours identified in psychology that might inhibit resilience (e.g. catastrophising).

Outcome: A new module was introduced into the September 2017 programme that linked extensively to existing modules.

Understanding and changing culture

Rationale for discussion: Past participants had frequently identified culture change as one of the areas where they wanted guidance.

- Faculty recognised that 'culture' was a topic with little consensus in the literature as to its definition or role in change. It was also noted that complexity theorists tended to dismiss culture as a factor, preferring instead to focus on individuals and their unique interactions with others. However, faculty members queried whether 'culture' is a different way of naming some of the emergent patterns that theorists would describe in complex systems.

- Faculty debated whether culture can be changed or whether it should be considered as a relatively fixed context within which change takes place. Culture was also viewed as multi-faceted within a system, with different cultures in different organisations or professional groups. This led to a question as to whether a 'system' culture exists.

• The difficulty of viewing a culture from within was discussed. This was linked to the concept of 'fresh eyes' (used in an innovation related module) as a way of seeing culture from an outsider's perspective. Outcome: A new module was introduced into the September 2017 programme based upon the materials prepared for the faculty discussion.

Table 37: Faculty learning identified in a discussion of new and revised modules

Appendix I After action reviews of the 2017 TCSL programmes

This appendix provides extracts from the summaries of faculty after action reviews undertaken following workshops with the September 2017 and October 2017 cohorts (as described in Cycle 4). Identifying details have been redacted.

After action review summary (27 October 2017 – after Workshop A)

Text extracted from a summary email.

Evaluation feedback

- We had a good return rate for the evaluations (slightly higher for the open cohort)
- Feedback was generally positive but some comments about sound issues, the need for more discussion time and the 'theory heavy' nature of some modules. Mostly we scored in the 4.5 to 5 range for relevance so very good as usual.
- People particularly liked the 9 factors ('using it as a mirror', 'plans to use in their system') and EI. [redacted] also picked up some interest in coaching.
- They were slightly less positive about visioning ('too general', 'not enough time') and the lens ('less relevant', 'too theory heavy')
- The world café was marmite but landed better with the UEC cohort (after [redacted] revised the format)

Faculty reflections

- The UEC cohort felt like a more cohesive group – but both groups got stuck into the activities
- Our tweaks to give more activity time seemed to work well for the UEC group
- We had some discussion about how we could create more cohesive teams for future cohorts - ideas included:
    - Some form of pre-day to prepare the teams (especially where new teams)
    - Encourage teams to do more together before the first workshop
    - Asking an application question about the history of the team (e.g. do they all know each other)
- As they got on well with the 9 factors it might be good to try and spend more time on this – it was a good conversation starter
- The room was not helpful – it is better for us to have wider / shorter rooms rather than narrow and long
- The UEC group were sometimes too engaged in discussions – trying to 'screen us out' (we need mechanisms for bringing them back to plenary e.g. in ground rules)
- The client manager (faculty link) role helped make a connection with some teams ('rooting for them')
- We should emphasise the learning journal more – we don't talk about the benefits of reflective writing and we could. Maybe give them 15min in Workshop C?
- There were interesting comments in the personal templates that would be worth theming and reflecting back (as linked to TCSL content)
- Our aspirations around people networking and connecting didn't quite pan out – so we need to re-emphasise this

Actions suggested

1. In the ground rules do something about 'respect for us and each other' – to help us bring them back to plenary discussions
2. Put up the templates again together with some analysis of them by [redacted] – to encourage more connections and networking
3. Adapt the world café sessions to reflect what was tried for the UEC cohort – pairing up teams
4. Add a learning journal reflective session (e.g. individual writing) in Workshop C

<u>After action review summary (23 November 2017 – after Workshop B)</u>

Text extracted from a summary email.

General discussion points

- As usual the feedback shows positive views on the module content, but we are getting more consistent requests for more team time to apply the materials. This seemed to be linked to a view that some modules are 'too theoretical'. Some thoughts and questions this raised were:
    - **Should we drop some content to allow more discussion time? If so, how do we choose?** We discussed the following considerations…
        - Some modules benefit more from the workshop environment and would be unlikely to be picked up back in systems (e.g. discussions of resilience, team effectiveness etc.)
        - Some modules might be presented as papers (or in other formats) – so we could reference them and allow participants to decide if they want to read up. This led to a discussion about doing short intros to some topics that then reference these materials
        - Various modules have a 'marmite' perspective – hitting the mark for some people but are less relevant for others (e.g. quantitative intelligence)
        - Delivery style may have an effect – some modules get generally higher ratings when they are perceived as more fun (e.g. polarities)
        - We need to differentiate between modules that are redundant (i.e. limited or no value) and those where we have the kernel of a good module but it requires further work or exploration (e.g. simple rules?)
        - We might want to revisit parallel sessions so that people can self-select what they learn and we can avoid cutting too much material
        - Should we somehow rank modules during the Strategy Week . . . but what criteria are we using?
    - **Should faculty do more to help people translate theory into practice?** We discussed…
        - The potential for breakout sessions where the faculty facilitate
        - Our own perceptions of 'theory' – do we present too much theory because we think (or feel) it is important (i.e. our own needs to demonstrate knowledge or show the breadth of a topic). Could we shift some theory into the background?
        - Are some module area just conceptually hard (e.g. VUCA) or difficult to condense without a dose of theory (e.g. systems

thinking) – is it possible (or even desirable) to simplify these further?
        - Are some modules already too short (e.g. public narrative) so of limited practical value and do we offer these separately as longer days (versus a view that for some modules even a light version can add significant value)?
    - **Does the flow of the content across the workshops make sense? Do the processes we follow work?** We discussed…
        - The way in which Workshop A is a contained unit giving an action orientated grounding . . . but workshop B is the 'problem child' as it focuses on the messiness (complexity and resistance). But is this avoidable?
        - Workshop C was anticipated as likely to be received OK as the first day on innovation is busy but fun whilst the second now has lots of time for team work.
        - The groups have fallen into a pattern of not commenting at the end of modules – so plenary interaction is limited. We talked about setting up tables during the exercises to be ready to feed back. We didn't want to put people on the spot.
    - **Do some of our challenges arise from having two aims – personal / team development and the need to deliver a change?** We discussed…
        - A perspective that maybe we've tipped too far into personal development (creating the kitbag) to the detriment of supporting teams to work on their changes.
        - Whether it is desirable / feasible to split these two aims into different programme types going forward (i.e. development focused programmes separate from change delivery programmes) – and thought this was a conversation to return to in the Strategy Week
        - The conversation on splitting led to ideas like 'feeder' sessions (e.g. the personal development programme helps in recruiting to a team programme) or could we radically redesign the session lengths (e.g. dedicate half a day to the 'trust and understanding' session)?
    - **Is the World Café right for the programme?** We discussed…
        - The café was rated a bit better this time but whilst people seemed to like the notion of making connections they queried the value of the session.
        - Its positioning in the two days might be a problem - it might be at a point where team based discussions are gaining momentum so sharing across teams feels less relevant (so should we keep it but flex its position on the agenda).
        - It feels like time to connect within teams is valued much more than connecting across teams – but there are also some interesting dynamics at play about trying to do work in the workshops rather than planning on how to continue conversations after which has affected the use of world café time

<u>After action review summary (22 January 2018 – after Workshop C)</u>

Text extracted from a summary email.

Areas discussed as requiring further consideration.

2. The future of the 'NHS reality' session (e.g. the feedback about wanting to feedback messages – but is that its purpose?)
3. Balancing breadth and depth of content to avoid the 'whistle stop tour' (e.g. comments on the 'tasting menu' and a faculty view around some content being superficial)
4. How to meet the challenge of using the tools back in the systems (i.e. the feeling that things are difficult out in STPs at the moment)
5. Getting more faculty input into teams during the workshops (e.g. the 'co-piloting of techniques')
6. Finding ways to increase the time teams have to apply the tools in the workshops (to address feelings of being 'overwhelmed' and allow for more meaningful feedback in plenary)
7. Managing the energy in the room
8. Helping team members get to know each other (i.e. dealing with the reality of new teams)
9. Dealing with the tensions around networking (i.e. wanting it but teams prioritising team time, fears around sharing etc.)
10. Getting the balance right between personal development and project delivery (and ensuring our messages about these are clear)
11. Making the most of the client manager role

The big challenge we have is that much of this revolves around freeing up time in the workshops and there are no obvious candidates for content to remove (as generally all the modules get rated as relevant). So maybe there is an additional area for discussion . . .

12. How we can shift content to other formats to free up workshop time

I noted down a few ideas that people offered:

- *Keeping the energy up* (e.g. use of music, videos, the throwable mike)
- *Getting teams comfortable working with each other* (e.g. fuller intros to their projects, use of team names, using the world café approach for paired teams, using the world café time for team time in the first workshop then for cross-team discussions in later workshops, repeat speed dating)
- *Supporting more use of the tools* (e.g. adapting the action planning template to include a mapping of the tools to actions, getting faculty to help teams during action planning)
- *Getting teams more ready for the programme* (e.g. a team leader preparatory webex)

Appendix J Faculty definitions of transformational change

This appendix provides the report provided to faculty on the individual definitions of 'transformational change' developed in Section 12.3. Faculty member names have been replaced by numbers.

The report opens with the suggested amalgamated definition and goes on to provide the individual faculty member definitions.

Defining Transformational Change

Transformational change in a health and care system occurs when structures, processes and behaviours alter in mutually reinforcing ways to create an inherently stable and radically different new state.

In a transformation, ambiguity, uncertainty and the conditions for emergence arise because of the diversity of stakeholders and interconnectedness of services. Change therefore occurs through a combination of planned action, experimentation, sense-making and adaptation based upon the direction and alignment provided by a vision for the change.

Leaders of transformational change focus on creating widespread allegiance to the transformation through relationship-building, framing and connecting others. They both deliver the change and create the conditions for change.

Notes:

1. I use 'alter' in the first line rather than 'are altered' because some of the change may occur spontaneously (emergently), without a guiding hand.
2. I've stuck to 'radically different' rather than 'fundamentally different', but the two are interchangeable.
3. Ambiguity and uncertainty are here linked to stakeholder diversity (and interconnectedness of services). This is meant to reflect goal /agenda / perspective diversity and a bit of the system's thinking perspective.
4. I was trying to keep the list of implications short and wanted to note that planned action is still part of the process – so focused on experimentation, sense-making and adaptation as the new elements. I toyed with mentioning cycles but it kept looking as if these elements were meant to be a cycle (which they are not).
5. I tagged on the vision bit as I'm positioning this as the compass that helps keep the mess on track.

6. In the leadership bit I was unsure how to differentiate between the central leadership and distributed leadership – it got too confusing to differentiate types of leader.

Faculty member 1

Transformational change is the fundamental and emergent move to a new, stable and different future state involving the engagement of numbers of people with multiple priorities, perspectives and approaches.

A transformational change leader is one who has, and creates, allegiance to the transformation primarily through relationship-building, connecting others and creating the conditions for fundamental shifts in behaviour, mindset, processes and purpose so the transformational change becomes the new order.

Faculty member 2

Transformation change is a messy emergent process where the experts don't know the answer. Regular adaptation of the pathway and modification of the vision is necessary as the multiple stakeholders and their organisations shape and modify the change as learning is gained. Investments in relationships are critical to cope with the undulation of the progress, the outcome, change in mind-sets, shifts in culture and multiple goals and to create and allegiance to the future. Progress is an integral part of the day job as transformational change requires adaption of multiple reinforcing aspects for a sustainable outcome.

Faculty member 3

Transformational change in the health and social care system is defined by its scale, scope, impact, and level of commitment.

- Scale. Transformational change is significant in terms of the scale of the change. It requires co-operation between multiple organisations, staff groups, and involvement of different types of user.
- Scope. Transformational change is broad and complex in scope. It relates to multiple interconnected services which are designed to benefit many types of users with different needs.
- Impact. Transformational change is designed to give a step-change in the performance of services in terms of quality, cost, or both.

- Commitment. Transformational change requires more than just new ways of working. It might require changes to job roles and staff terms and conditions, the physical location of services (estates), and new equipment. As such, it is likely to require significant up-front investment, of both money and time. Once changes are implemented, there is no going back.

Andrew

Transformational change occurs when the behaviours, structures and processes within a social system are irreversibly altered to create a new state that is radically different and inherently stable.

Transformation occurs through the purposeful actions of a coalition of people working towards a vision or shared goals and requires experimentation, on-going sense making and course correction, broad stakeholder engagement and tolerance for ambiguity and uncertainty.

Appendix K Viewing this research as transformational change

This appendix provides reflections on this research by using the knowledge domains as a series of lenses to examine the change process.

The rationale for applying the knowledge domains to this research

The premise supporting this appendix is that this research had transformational characteristics due to the underlying complexity of the problems being addressed.

Appendix C identifies three generic causes of complexity.

- 'Component complexity' was represented here by the multiple possible configurations for content and pedagogical practices within TCSL programmes and the varying contexts for programme delivery.
- 'Goal complexity' arose as programmes sought to combine professional development with project changes, increased by the underlying ambiguity in the meaning of 'transformation'.
- 'Social complexity' was encountered in the collaborative process undertaken with other faculty members. Decisions and actions had to be negotiated and remain cognisant of differing perspectives on learning and change mechanisms.

Content from the knowledge domains is therefore considered here to further understand my actions and those of the faculty during this research.

Based upon a reflective review of all TCSL knowledge domains, the following sections relate TCSL content to this research. Each section includes illustrative slides from workshop materials to introduce the relevant concepts.

Experiencing confirmation bias

In the module 'Understanding your system', TCSL participants are introduced to the notion of confirmation bias via an explanation of the 'ladder of inference' (Argyris, 1982). As shown in Figure 165, this describes a human tendency to seek out data that confirms pre-existing views whilst ignoring disconfirming data. This then forms part of a feedback loop that reinforces a distorted picture of reality.

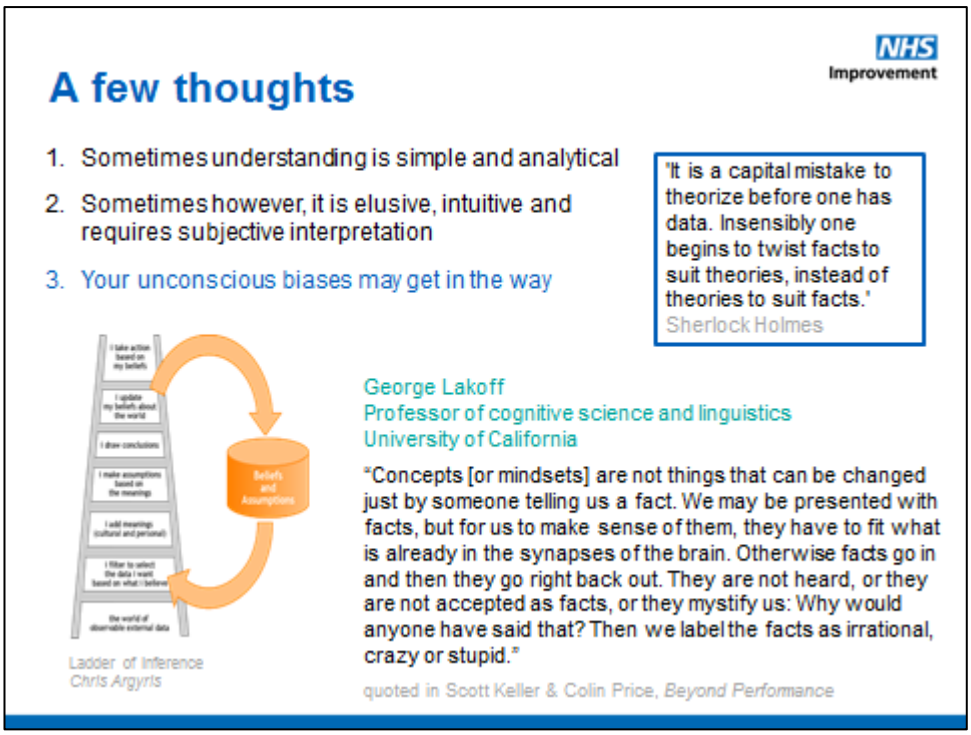

Figure 165: Slide describing mindset change and the interpretations of facts

In this study, in seeking to generate data from external sources as described in Chapter 8, I experienced how faculty members sometimes chose to discount data that challenged their pre-existing views. This filtering process was typically based on challenging the validity of disconfirming data.

For example

- When the longitudinal case studies (Section 8.3) began to challenge the view that transformation could only be led by the most senior leaders, one faculty member questioned whether this data was relevant to our work. They had constructed a personal filter that linked transformation to seniority and thus sought out evidence in the data that the case studies did not represent transformational projects. This led to them initially dismissing the case studies rather than seeing them as offering insight into different aspects of leadership.

- Similarly, in reviewing the chief executive interviews (Section 8.2) one faculty member sought to dismiss the findings. They personally equated transformation with consensus led change across organisational boundaries and thus reasoned that in speaking about changes within their organisations these chief executives represented a different, and irrelevant, context. However, in their broad dismissal of the data this faculty member also avoided considering whether power had played a

part in all the activities of these chief executives. Ultimately this inhibited them identifying how the chief executive experiences might in some ways be relevant to TCSL participants.

The filters within these specific examples are discussed in Cycle 2 where a faculty discussion process was used to try and reveal the underlying faculty assumptions. However, generating the reflexivity required to challenge existing mindsets is a gradual process of breaking into the self-reinforcing cycle shown in Figure 165. Festinger describes this as the gradual creation of cognitive dissonance (1962), as mindsets are slowly countered through the gradual accumulation of disconfirming data. This explains why some discussions, like those on seniority, resurfaced throughout the cycles described in Chapters 9 to 11.

Recognising a practice dilemma

Theories of leadership in major change suggest that a leader needs to have some form of inner passion (Fuda, 2009) or a 'calling' (Westley, Zimmerman and Patton, 2007). This is sometimes linked to their role in inspiring others and creating collective purpose (Howell and Avolio, 1993). Theory also suggests that this personal belief in a direction of change needs to be expressed in ways that build commitment in others, for example through 'framing' of the issues (Fairhurst, 2005) or through wider processes of 'sense-giving' (Maitlis and Lawrence, 2007).

In TCSL programmes some of these ideas are expressed in the module on 'Burning ambition', illustrated in Figure 166.

Figure 166: Slide describing a leader's role in transformation

This approach to change leadership implies that leaders can use data selectively to enhance particular perspectives on reality, albeit based upon a belief in the direction of change required. In the change literature this is sometimes (though not routinely) recognised as having manipulative undertones. For example, Bevan, Plsek and Winstanley (2013, p. 33) note how leaders can create momentum for change through using data to provide "just the appearance of success", implying a disingenuous use of the data.

In adopting an AR methodology I was struck by how this leadership role in change is different and perhaps antithetical to that of the researcher. Whilst authors such as Coghlan and Brannick (2014) emphasise the role of data generation in AR to challenge premises, change leadership through sense-giving practices as described above appears to seek to reinforce premises in pursuit of commitment to a goal.

My experience of these two perspectives was that of a paradox in the insider-researcher role that sometimes acted to inhibit or weaken my insider voice for change. As discussed in Appendix C, complex systems are not characterised by simple cause and effect relationships. Data about these systems can therefore be ambiguous and open to interpretation. In my researcher role throughout the cycles of Chapters 9 to 11 I tried to surface this ambiguity. Yet, as a leader of change I also had my own views on what was right for the TCSL programmes. I therefore felt the pull to ignore the ambiguity to argue for my own beliefs by

elevating one interpretation of the data over another. This placed my 'researcher' and 'insider' roles in conflict, sometimes leading to a quietening of my insider perspective as I chose to value data exploration over the advocacy of a position.

Throughout this research I experienced this issue of 'voice' as an on-going issue as noted in Section 6.2. In the literature on AR (described in Section 4.2) the paradoxical AR tension for the insider researcher of recognising ambiguity whilst also advocate direction appears under explored. In part (as noted in Section 4.2), this might be due to an underlying 'mechanical' premise in some guidance on AR that assumes data generation serves to resolve ambiguity rather than providing a platform for the social and leadership processes that use that data.

Seeing attractor patterns

Complexity theorists use the concept of 'attractor patterns' to describe system behaviours that are non-random yet not entirely predictable. Sweeney and Griffiths (2002, p. 6) define an attractor as "the area that a system moves towards and where it will tend to stay".

In TCSL programmes the concept of attractors is introduced via the slide shown in Figure 167. This uses the metaphor of the flight of a bird and how this cannot be controlled but it can be influenced in non-random ways by attractors such as food.

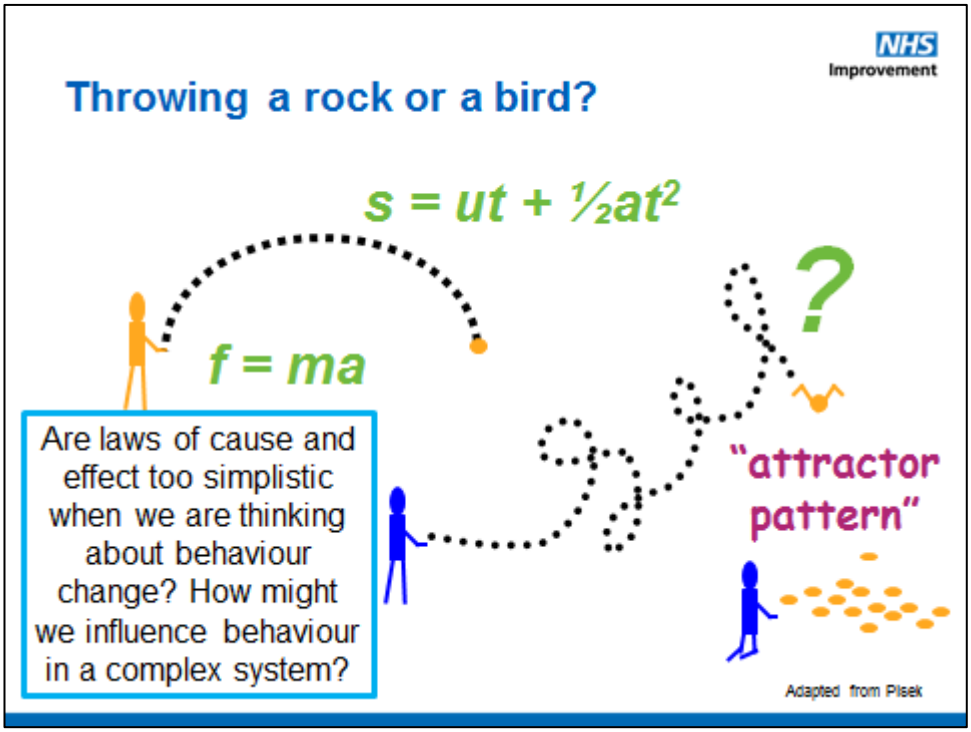

Figure 167: Slide describing attractor patterns using the metaphor of a bird

Westley, Zimmerman and Patton (2007) suggest that attractors are present in social systems, linking these to underlying rules or forces that shape behaviours. As Figure 167 implies, they suggest that observed behaviours can be used as a basis for postulating potential existing attractors.

In Figure 168 I have hypothesised some attractors (outer boxes) that account for some observed faculty behaviours (inner boxes) in the context of the development of the TCSL programmes and knowledge domains. This framework was derived from reflecting upon the cycles described in Chapters 9 and 10.

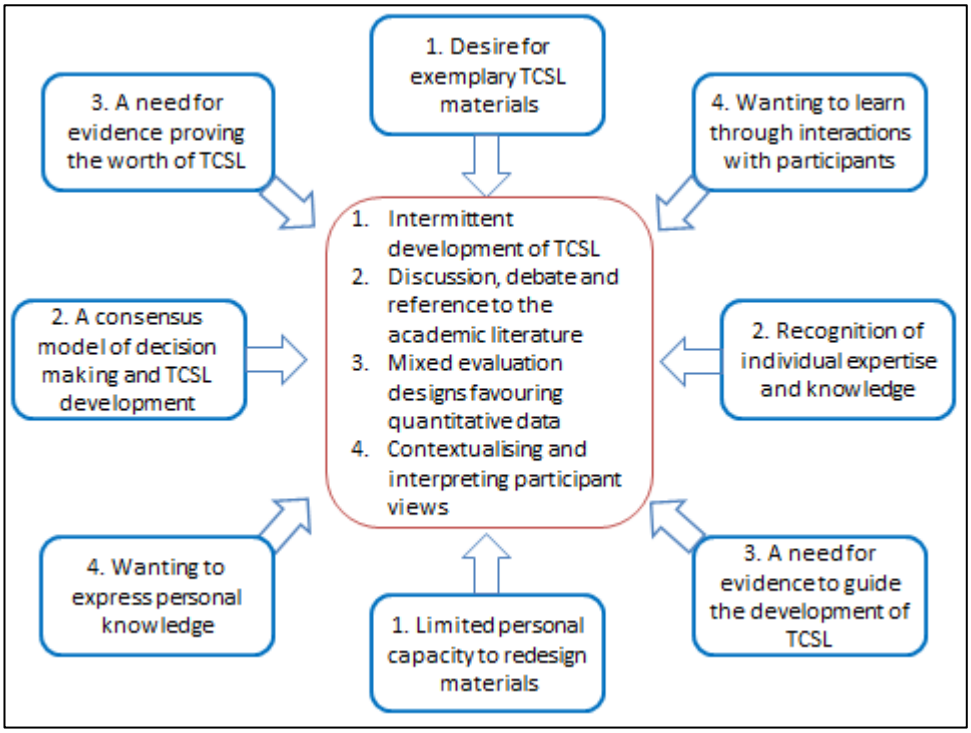

Figure 168: An attractor pattern influencing action and research in this study

Figure 168 shows the attractors as opposing numbered pairs, acting in a form of dynamic tension that collectively created the behaviours described in the middle. For example, the faculty desire to create exemplary TCSL materials was in tension with their limited personal capacity to contribute. This shaped the pattern of intermittent involvement in development activities.

Representing attractors in this way reflects Lewin's (1947) 'force-field' description of system dynamics where stable system behaviours are a product of balanced opposing forces. This perspective is also reflected in my own interpretation of system dynamics and change described in Appendix C.

Although Figure 168 was created as an explanatory framework it would also have value in informing future work with the faculty. Potential activities could be considered in light of how they might be shaped by these attractors or how the attractors themselves might need to become a focus for interventions in order to achieve certain goals.

Using systems thinking

'Systems thinking' is a discipline that considers how the constituent parts of a system interact to create the observed behaviours of the whole. Typically it focuses on the existence of feedback loops and their common configurations known as 'archetypes'. Many authors have contributed to this field which was popularised through the work of Senge (1991).

Two types of feedback known as 'reinforcing' and 'balancing' loops (Figure 169) form the constituent parts of all archetypes.

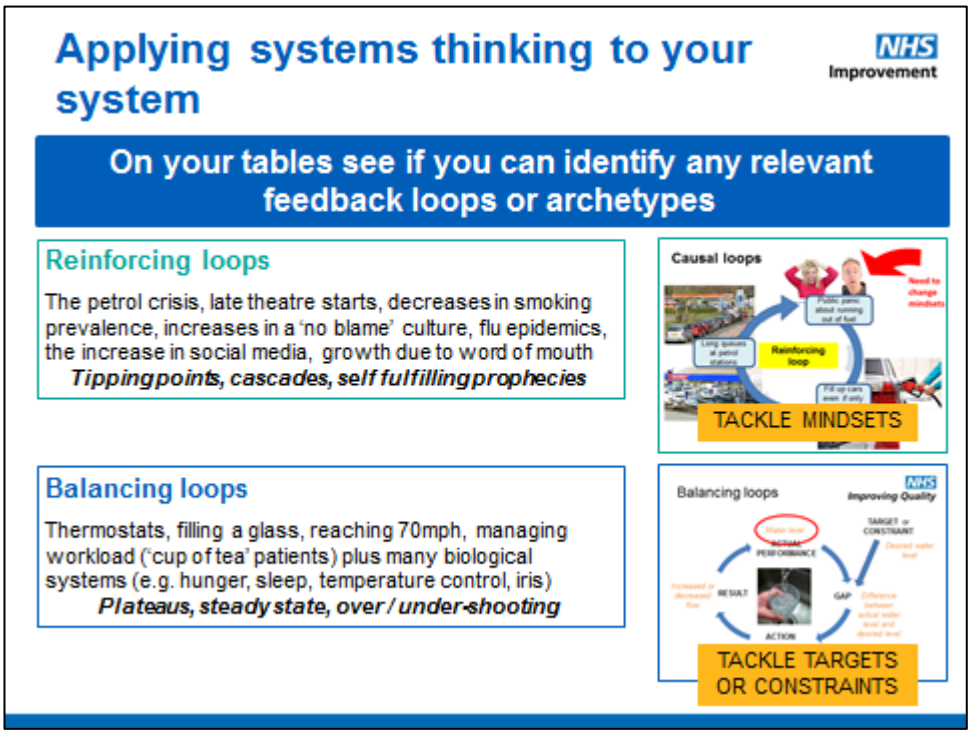

Figure 169: Slide describing basic feedback loops used in systems thinking

Four archetypes are described in the TCSL programme as shown in Figure 170. As the examples show, these archetypes are common across a wide variety of systems.

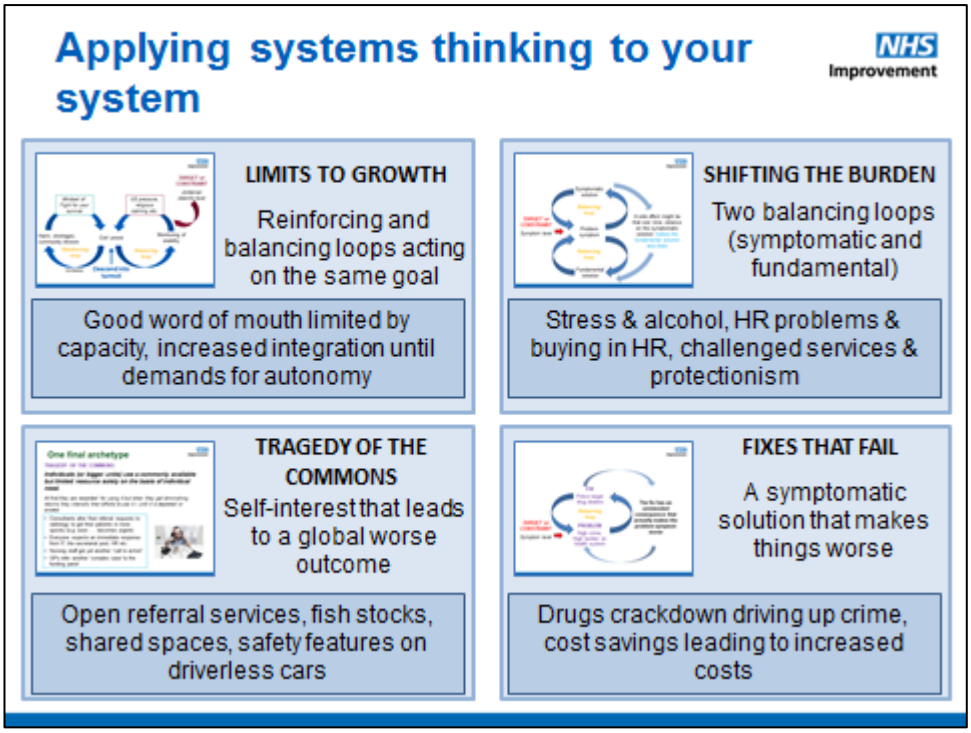

Figure 170: Slide describing common archetypes used in systems thinking

In the 'shifting the burden' archetype two balancing feedback loops compete to balance the same factor to achieve a target level or goal. By convention, one loop is said to represent a 'fundamental' solution, acting on the underlying problem. The other loop, is said to represent a 'symptomatic' solution, acting only on the symptoms. The archetype is recognised as problematic in systems where the symptomatic solution is easier or quicker to adopt and thus becomes the preferred solution. Typically the archetype also incorporates an additional feedback loop that over time makes the use of the fundamental solution less likely.

In TCL programmes the example of stress at work is used to illustrate this archetype. A tolerable stress level can be achieved either through the fundamental solution of dealing with excessive workloads or through the symptomatic approach of masking the stress through drugs or alcohol. Adopting the symptomatic solution can lead to addiction that increases reliance on this solution over time.

Reflection on the cycles of Chapters 9 to 12 has identified two examples of this archetype that have influenced TCSL designs.

- Where TCSL teams have a degree of dysfunction, two methods can be used to support productive conversations. The fundamental solution is to devote time to team development. The symptomatic solution is to create highly structured activities that limit the impact of team dynamics on the outputs achieved. Over time reliance

on structured activities can also serve to supress team issues making them harder to deal with later.

- Where TCSL teams have capacity constraints, two methods can be used to find time to work on their projects. The fundamental solution is to carve out time in their system, prioritising their project over other work activities. The symptomatic solution is to rely on the time within TCSL programmes to do their project activities. Over time reliance on doing project activities within TCSL programmes can make it harder to argue for capacity in their system.

Figure 171 illustrates the first example in a format commonly used in systems thinking showing the two balancing loops (top and bottom) and the reinforcing loop (right).

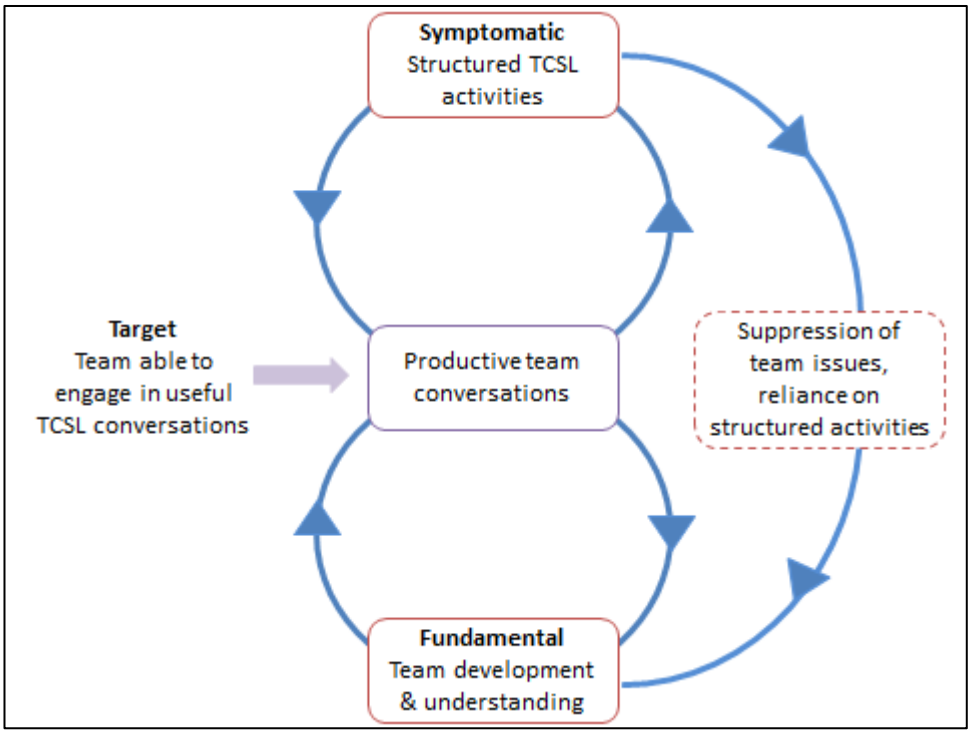

Figure 171: A shifting the burden archetype describing team conversations

Faculty discussions during this study demonstrated some awareness of the archetype shown in the figure. For example in Cycle 2 the participation of a number of newly formed teams led to an exploration by faculty members of the different elements of Figure 171. For example, discussing

- the degree of team cohesion needed for a team to lead a transformation based upon the TCSL programme (i.e. exploring our perceptions of the target);

- how much team development to include in the programmes and how it could be incorporated into the structured activities (e.g. through discussion of the group processes used); and

- whether criteria could be applied when accepting teams onto the programme that would ensure the required level of team functioning (i.e. screening out teams significantly below the target level).

The second archetype example is illustrated in Figure 172 which shows the two competing approaches to allocating time to project activities.

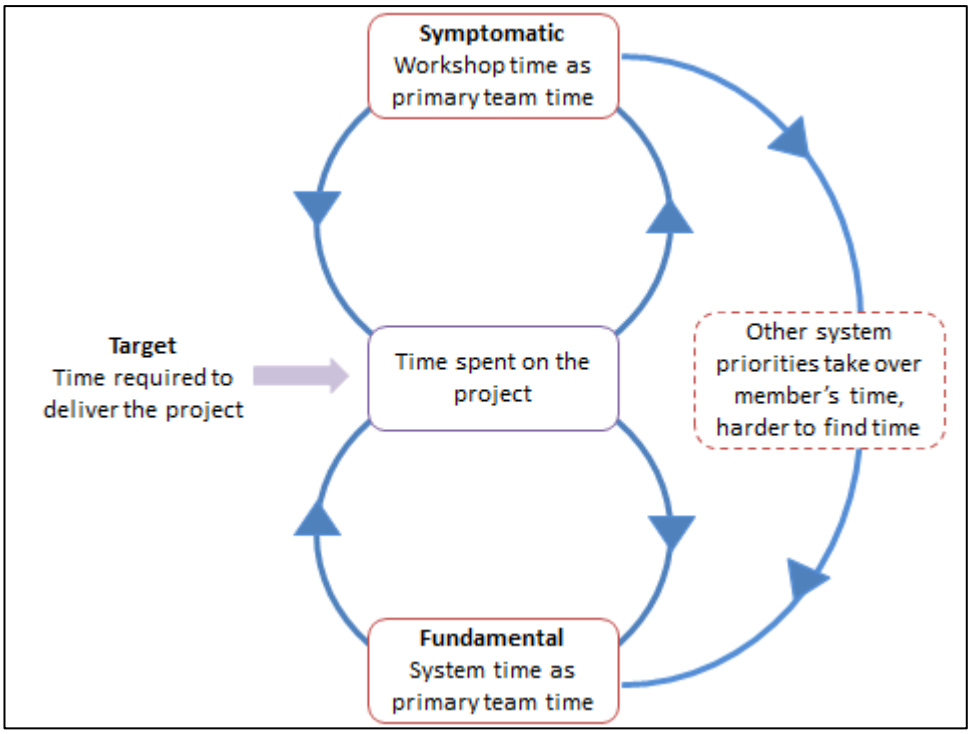

Figure 172: A shifting the burden archetype describing participant time allocation

This example helps to explain some of the evolution of the faculty's reaction to participant requests for more time for team-based activities during the programmes. Whilst initially requests were perceived as valid critiques of the programme designs, gradually faculty began to suspect that the unceasing requests were a result of a symptomatic over-reliance on programme time. This ultimately led to faculty reinforcing the need for teams to set aside time in their systems to work on their change projects.

Another archetype shown in Figure 170 is 'fixes that fail'. This is similar to 'shifting the burden' but now, despite short term benefits, the symptomatic solution eventually makes the underlying problem worse. An example used in TCSL programmes relates to the

legalisation of drugs. This questions whether the short benefits of (symptomatic) efforts to criminalise the selling and taking of drugs are ultimately replaced by greater societal problems. This occurs as criminalisation activities drive drug use underground resulting in higher drug prices and more severe criminal activity. Such uses of this archetype demonstrate how its depiction of feedback loops can lead to controversy as it implies that actions to resolve a problem are themselves contributing to the problem.

Applying a 'fixes that fail' perspective to this study similarly leads to a controversial questioning of the value of the TCSL programmes as illustrated in Figure 173.

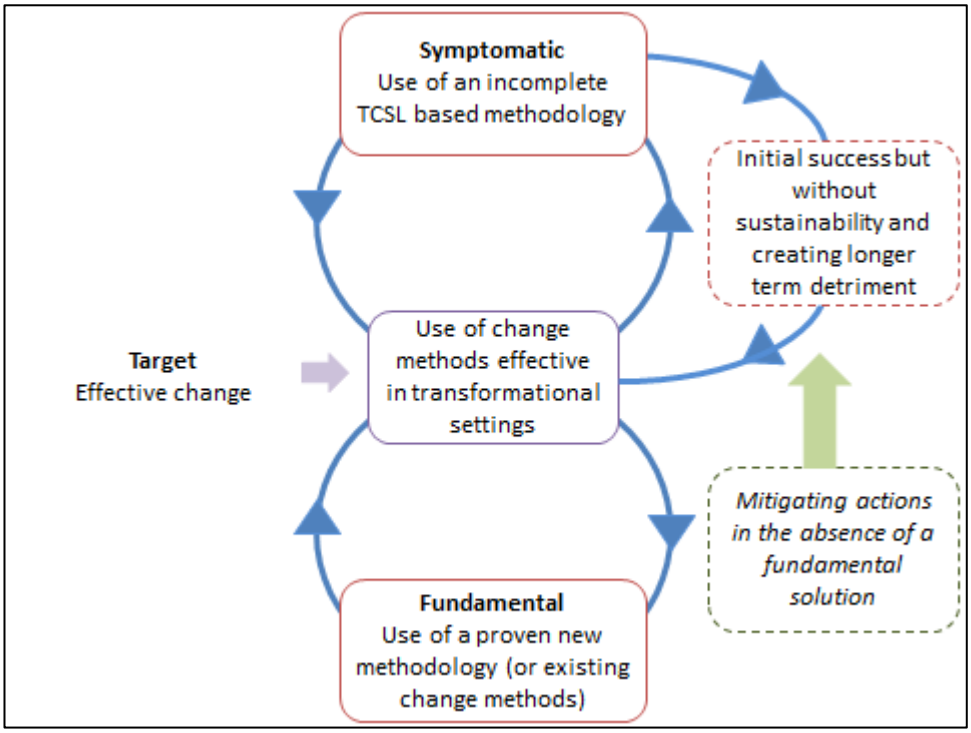

Figure 173: A fixes that fail archetype describing TCSL as a symptomatic solution

This figure is based upon the premise that TCSL content is an emerging body of knowledge and is therefore incomplete. This means that if the goal is effective change then there is a risk that TCSL itself is only a symptomatic solution, offering some initial success by introducing new practices but ultimately representing an incoherent approach. In contrast, the fundamental solution in its idealised form, is represented by a new and proven transformation methodology. The absence of such a methodology explains why in Chapters 9 to 11 the faculty came to increasingly emphasise the holistic nature of the knowledge domains and the need for participants to integrate them with their professional practice. Both approaches can be interpreted as efforts to mitigate the risk of worsening change practice arising either through gaps in TCSL content or only partial adoption of the content.

Recognising polarities

Polarities (Johnson, 1992) are introduced in TCSL programmes to describe how change projects can encounter paradoxical tensions that lead to polarised views on the direction of change.

Figure 174 shows some typical polarities suggested to TCSL participants as prevalent in major NHS change programmes. These are suggested as existing as 'both / and' tensions to be managed rather than 'either / or' choices to be made.

Figure 174: Slide describing some of the common polarities in major changes

Polarities have already been recognised in previous chapters. These have included

- taking the approach of 'foregrounding or backgrounding' the research activities in this work (Section 6.2),
- the need to avoid 'either / or' thinking described by a chief executive (Section 8.2),
- the management of opposing yet complimentary priorities described in the longitudinal case studies (Section 8.3),
- the 'frontloading or extending' approaches to delivering TCSL content (Cycle 7), and

- offering a 'breadth or depth' of modules in programmes (Cycle 8).

Figure 175 suggests further polarities identified from faculty discussions throughout the cycles of Chapters 9 to 11. Each polarity pair is accompanied by an example of the type of question they evoked.

Focus on participant skills	V	Focus on system change
Should we develop their skills or use programmes instrumentally to achieve change?		
Meeting the needs of teams	V	Meeting the needs of the cohort
How do we respond to diversity in the needs of teams?		
Use academic literature	V	Use faculty professional experience
What should inform the content of modules and TCSL as a whole?		
Standardise TCSL designs	V	Continuously refine TCSL designs
Does the evolution of TCSL warrant the resources it takes?		
Encouraging teams to self facilitate	V	Faculty intervening to facilitate teams
Does greater insight come from self direction or guidance?		
Teaching TCSL through theory	V	Teaching TCSL through examples
How should TCSL be grounded in theory and explored through examples?		
Shaping participant conversations	V	Accepting participant choices
Will participants have the conversations they need to have?		
Differentiating transformation from the mechanical paradigm	V	Describing transformation as encompassing the mechanical paradigm
How do we challenge existing mindsets about change?		

Figure 175: Polarities observed in faculty discussions

These polarities reflect a variety of tensions relating to the role of the faculty, the goals of the TCSL programmes, how participants learn and how knowledge is used to shape the programmes. Their existence as polarities rather than choices explains why conversations retuned to these areas at various points in the research period.

Whilst the tensions inherent in each of the polarities in Figure 175 are mostly self-evident, the final polarity requires more explanation as it is itself about polarisation.

As was noted at the beginning of this report, the emerging new paradigm representing transformation is at once antithetical to the mechanical paradigm and encompassing of it. For faculty this presented as a polarity in how to describe transformation. Do we emphasise how transformation is different from mechanical approaches, polarising them in order to suggest new types of action? Or, do we combine two opposing perspectives and risk confusion? In this research, the management of this tension can be seen in the evolving story of Chapters 9 to 11. Whilst early programmes emphasised how transformation differed from

mechanical approaches to change, later programmes took a more balanced approach to differentiation and integration. For example, the growing focus on suggesting participants combine TCSL content with their professional practice can be seen as a more integrative approach. Similarly, in Cycle 7 the requirement for a narrative arc to join the start and end of TCSL programmes was (in part) a response to this tension. This arc saw participants initially being exposed to a view that separated 'transformation' from the 'mechanical' with this later being altered to offer a more integrated perspective.

Creating a culture

In TCSL programmes participants consider the role of culture in their change projects. It is portrayed as both a contextual factor and as something open to alteration in pursuit of their change goals.

The 'cultural web' (Johnson, 2000) is offered as a diagnostic tool for understanding the paradigm underpinning local cultures. It is also suggested as a planning tool for identifying ways to change that paradigm. The web describes six types of system artefacts (as shown in Figure 176) that result from a culture and which can influence a culture when they are purposefully altered. Also shown in the figure is Schein's view (1999) of how artefacts relate to the assumptions and beliefs that make up the paradigm.

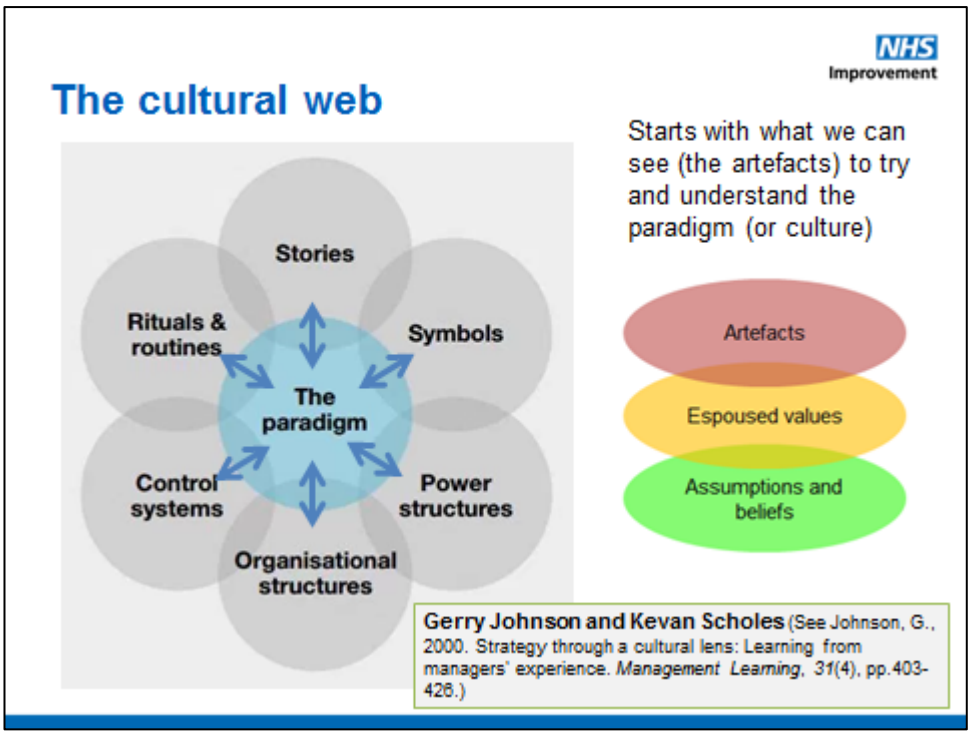

Figure 176: Slide describing the cultural web

In this research each TCSL programme can be considered as a temporary cultural environment created jointly by the faculty and participants. Faculty seek to shape this environment through the TCSL programme design and our interactions with participants, altering both as a result of our learning from each TCSL programme. The cultural web therefore provides a way to make sense of our actions and further understand the paradigm guiding those actions.

Figure 177 looks across the various TCSL programmes during this research to highlight some of the artefacts observed within them.

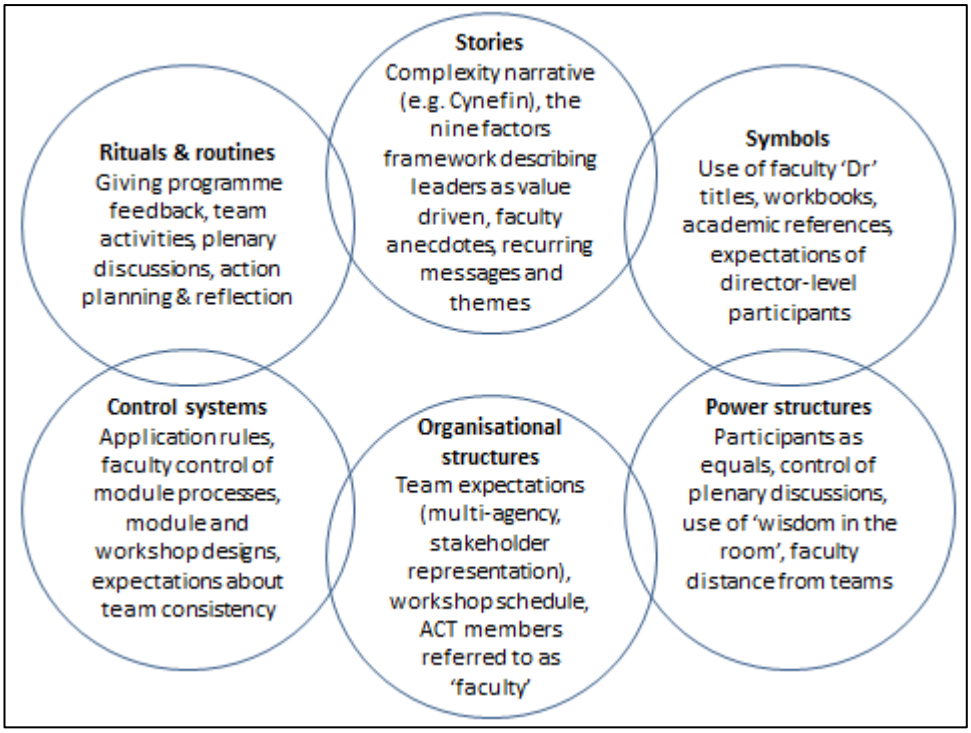

Figure 177: Using the cultural web to describe TCSL programme design

The artefacts in Figure 177 represent a paradigm that is intentionally focused on participant learning and content application, locates faculty both as experts and facilitators and identifies TCSL with change in complex environments. The artefacts also serve to shape participant expectations about their learning experience. For example, participants are positioned as knowledgeable experts in their own right contributing to the 'wisdom in the room' and are expected to reflect and develop their own models of change (i.e. remaining accountable for how they take action in their systems).

The programme artefacts also reveal less explicit assumptions within the faculty paradigm. For example, they suggest

- belief in the central role of seniority and authority in shaping transformational change (as evidenced by participant recruitment processes and discussed in Cycle 2),
- a conceptualisation of the ideal project team as representative of the system and as equals in the change process (i.e. ignoring existing power relations),
- a symbolic role for participant feedback activities in demonstrating faculty commitment to their learning (e.g. requests for high volumes of data beyond the practical requirements of faculty), and
- reliance on titles (e.g. 'Dr') and academic referencing to build faculty credibility.

One benefit of taking this cultural web perspective is that it can also reveal potential contradictions in the underlying paradigm. Here two are suggested.

- Participants are positioned as 'experts' in their own right and as adult learners. Yet programmes are also highly structured and controlled. In transactional analysis terms there is a desire for adult-adult relationships yet programmes act to create adult-child relationships (Berne, 2016). For faculty this was sometimes experienced as participants 'misbehaving' or 'rebelling' (e.g. ignoring activity instructions or not returning on time for plenary discussions).

- Academic wisdom is portrayed by faculty as important since it supports our credibility. Yet participants predominantly bring practical wisdom (i.e. the tacit knowledge of 'doing' described as procedural knowledge by Krathwohl, 2002). This created a mixed message for participants that may have contributed to low participation in some plenary discussions.